TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

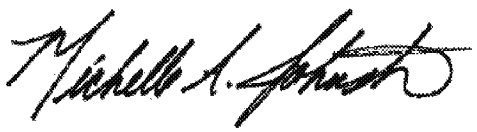
ANALYTICAL REPORT

Job Number: 280-106426-1

Job Description: FAY-2018 Residential Sampling

For:
Chemours Company FC, LLC The
c/o AECOM
Sabre Building, Suite 300
4051 Ogletown Road
Newark, DE 19713

Attention: Michael Aucoin



Approved for release.
Michelle A Johnston
Project Manager II
2/28/2018 8:18 AM

Michelle A Johnston, Project Manager II
4955 Yarrow Street, Arvada, CO, 80002
Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy
02/28/2018

cc: Barbara McGraw
Kelly Rinehimer

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.
TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002
Tel (303) 736-0100 Fax (303) 431-7171 www.testamericainc.com

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE
Client: The Chemours Company FC, LLC
Project: FAY-2018 Residential Sampling
Report Number: 280-106426-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

For samples requiring analysis at a dilution, the dilution factor has been multiplied by the Method Detection Limit (MDL) for each analyte and evaluated versus the project-specific reporting limit (PSRL). If the obtained value is below the PSRL, then the PSRL is preserved as the reporting limit for the diluted result, otherwise, the obtained value becomes the reporting limit. This is done in order to maintain the PSRL to meet project requirements at the request of the client and to report the lowest possible RL for each analyte.

Receipt
The samples were received on 2/15/2018 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.8° C and 4.0° C.

Receipt Exceptions
The requested analyses were logged on a 15 business day turn around time due to current laboratory capacity.

No other anomalies were observed during sample receipt.

Standards
Analytical standards were prepared using the acid form of the compound Perfluoro(2-propoxypropanoic) acid (HFPO-DA).

The surrogate compound, 13C3 HFPO-DA was introduced at the extraction step and was used as an internal standard for quantitation of HFPO-DA. The concentration of the surrogate spike is 0.2ug/L in water samples or 50ug/kg in soil samples.

Sample Extraction and Analysis
The samples presented in this report were extracted for the target analyte by TestAmerica Denver's SOP DV-OP-0019, Rev. 8 and analyzed for the target analyte by TestAmerica Denver's SOP DV-LC-0012, Rev. 14, with the exceptions of the items indicated in the DuPont QAS. Sample FAY-D-3980NIRAD-W1-1-021418 (280-106426-1) was chosen to be analyzed as a duplicate and also to be spiked with the target analyte.

For water samples a 250mL aliquot of each sample is extracted using solid phase extraction technique with methanol conditioned Weak Anion Exchange cartridges. Each sample is spiked with the internal standard/surrogate, prior to extraction. After the sample is passed through the cartridge, the analytes are eluted with 2%Formic Acid, 6mLs of HPLC grade MeOH and then with 4mL of 10% ammonium hydroxide in methanol. The final volume is brought to 5mL using reagent water and the extract is analyzed by LC/MS/MS.

The target analyte is separated from other components on a high-performance liquid chromatography (HPLC) C18 column with a mobile phase mixture of water containing 0.1% ammonium acetate and methanol. The mass spectrometer detector is operated in the electrospray (ESI) negative ion mode. The instrument is calibrated at 7 concentration levels (0.2, 0.5, 1.0, 2.0, 5.0, 10 and 20ug/L). The target analyte is detected as the perfluoro(2-propoxypropanoic) acid with the parent ion of 328.8 amu. The daughter ions used for analysis by LC/MS/MS are at 284.8 amu. The ratio of the peak areas to the two ions must be ±20% of the ion ratios in the mid-point ICAL for qualitative identification. Sample results are quantitated using the internal standard dilution.

Tuning and Calibration
The instrument is tuned with a solution of the target analyte such that mass assignments are within ±0.5 amu of the daughter ions. The instrument is calibrated with seven concentration levels from 0.2ug/L to 20ug/L. Linear regression ($y=ax+b$) or quadratic functions (y=ax+cx2+b) are used with a correlation coefficient or coefficient of determination ≥0.990.
Following initial calibration (ICAL), an initial calibration blank (ICB) is tested, which consists of methanol spiked with the surrogate. The result for the target analyte must be less than one half the reporting limit (RL) to proceed.

Next an initial calibration verification (ICV) standard is tested. This is a mid-level concentration standard from a different vendor from the ICAL standard. If a different vendor is not available then, a different lot number from the same vendor is used. The ICV must be within 80-120% of the true value.

The quantitation limit verification standard is a standard from the same source as the ICAL tested run at the RL level to determine accuracy near the detection limit. This recovery must be within 70-130%.

Continuing calibration verification (CCV) standards are tested every 10 injections and are from the same source as the ICAL and are at mid-level concentration. The recovery of the CCVs must be 70-130% or recalibration is necessary.

Method QC Samples

The Method Blank is processed reagent water spiked with internal standard and prepared with each batch of 20 samples of the same matrix. All samples in the batch are processed at the same time and with the same reagents. The method blank must be less than the LOD or associated batch samples must be re-extracted and reanalyzed.

Each batch is prepared with a low- and a mid-level concentration spike Laboratory Control Samples (LCS). The recoveries of these samples must be within 70-130% or associated batch samples must be re-extracted and reanalyzed. If the recovery is biased high and samples are non-detect, results can be reported without re-extraction.

Calculations

Sample Result Calculation

For internal standard quantitation,
HFPO-DA Response = Area of HFPO-DA * 13C3 HFPO-DA concentration / area of 13C3 HFPO-DA

Concentration in waters, ug/L = (Cex Vt)/(Vo)

Where:
Cex = Concentration measured in sample extract from the target analyte response (ng/mL)
Vt = Volume of total extract (mL)
Vo = Volume of water extracted (mL)

2. Percent Recovery Calculation

Spike Recovery = (SSR-SR)/(SA)x100%

Where:
SSR = Spike sample result
SR = Sample result
SA = Spike added

3. Relative Percent Difference Calculation

RPD = (SR - DR)/(1/2(SR+DR))x100

Where:
SR = Sample result
DR = Duplicate result

HFPO-DA Analysis Anomalies

Samples FAY-D-3980NIRAD-W1-1-021418 (280-106426-1), FAY-D-3980NIRAD-W1-1-021418-D (280-106426-2), FAY-D-5533MRSHR-W1-1-021418 (280-106426-3), FAY-D-5617MATTH-W1-1-021418 (280-106426-4), FAY-D-6520TABOR-W1-1-021418 (280-106426-5), FAY-D-6719TABOR-W1-1-021418 (280-106426-6), FAY-D-FB-021418 (280-106426-7), FAY-D-5500RNGTL-W1-1-021418 (280-106426-8), FAY-D-71LAURA-W1-1-021418 (280-106426-9), FAY-D-3995NIRAD-W1-1-021418 (280-106426-10), FAY-D-3995NIRAD-W1-2-021418 (280-106426-11), FAY-D-5375MRSHR-W1-1-021418 (280-106426-12), FAY-D-4013NIRAD-W1-1-021418 (280-106426-13) and FAY-D-4013NIRAD-W1-2-021418 (280-106426-14) were analyzed for Perfluorinated Hydrocarbons in accordance with DV-LC-0012. The samples were prepared on 02/23/2018 and 02/24/2018 and analyzed on 02/26/2018.

Calibration 9 (STD125) has been included in the raw data, but was not used in the Initial Calibration (ICAL).

Reporting limits have been adjusted accordingly for the initial volumes extracted.

The project required MS and Sample Duplicate could not be performed for prep batch 280-406000, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable low-level LCS and mid-level LCS/LCSD analyses data.

No other analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-3980NIRAD-W1-1-021418	280-106426-1	2/14/2018 8:49	2/15/2018	2/26/2018	0.063

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
** ug/L – micrograms/liter (parts per billion)

DEFINITIONS:
Reporting Limit (RL) for the procedure is approximately 0.010ug/L.

RESULTS ARE CALCULATED ACCORDING TO THE FOLLOWING CRITERIA:
For samples analyzed in duplicate:
If the sample and laboratory duplicate are greater than 5X RL, the relative percent difference (RPD) is less than 20, the average value is reported. If the RPD is greater than 20, the higher value is reported.

If the sample or laboratory duplicate are less than 5X RL, and the absolute difference is less than RL, the average value is reported. If the absolute difference is greater than the RL, the higher value is reported.

Matrix Spike Recoveries: Acceptable Range: 70%-130%

TestAmerica Sample ID	Matrix Spike Recoveries
280-106426-1	105%

SUBMITTED BY:

Michelle A. Johnston

2/28/2018

Michelle A. Johnston, Project Manager Date

Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-3980NIRAD-W1-1-021418-D	280-106426-2	2/14/2018 8:49	2/15/2018	2/26/2018	0.066

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
** ug/L – micrograms/liter (parts per billion)

DEFINITIONS:
Reporting Limit (RL) for the procedure is approximately 0.010ug/L.

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TestAmerica Sample ID	Matrix Spike Recoveries
280-106426-1	105%

SUBMITTED BY:

Michelle A. Johnston, Project Manager — 2/28/2018 Date

Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-5533MRSHR-W1-1-021418	280-106426-3	2/14/2018 9:14	2/15/2018	2/26/2018	0.057

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
** ug/L – micrograms/liter (parts per billion)

DEFINITIONS:
Reporting Limit (RL) for the procedure is approximately 0.010ug/L.

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TestAmerica Sample ID	Matrix Spike Recoveries
280-106426-1	105%

SUBMITTED BY:

Michelle A. Johnston

2/28/2018

Michelle A. Johnston, Project Manager Date

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Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-5617MATTH-W1-1-021418	280-106426-4	2/14/2018 10:29	2/15/2018	2/26/2018	0.028

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
** ug/L – micrograms/liter (parts per billion)

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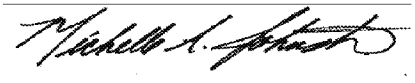
TestAmerica Sample ID	Matrix Spike Recoveries
280-106426-1	105%

SUBMITTED BY:



2/28/2018

Michelle A. Johnston, Project Manager Date

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Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-6520TABOR-W1-1-021418	280-106426-5	2/14/2018 12:48	2/15/2018	2/26/2018	<0.010

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
** ug/L – micrograms/liter (parts per billion)

DEFINITIONS:
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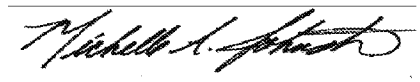
The project required MS and Sample Duplicate could not be performed for prep batch 280-406000, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable low-level LCS and mid-level LCS/LCSD analyses data.

SUBMITTED BY:



2/28/2018

Michelle A. Johnston, Project Manager Date

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-6719TABOR-W1-1-021418	280-106426-6	2/14/2018 15:42	2/15/2018	2/26/2018	0.024

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
** ug/L – micrograms/liter (parts per billion)

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SUBMITTED BY:

Michelle A. Johnston, Project Manager — 2/28/2018 Date

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-FB-021418	280-106426-7	2/14/2018 7:15	2/15/2018	2/26/2018	<0.010

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
** ug/L – micrograms/liter (parts per billion)

DEFINITIONS:
Reporting Limit (RL) for the procedure is approximately 0.010ug/L.

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2/28/2018

Michelle A. Johnston, Project Manager — Date

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Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-5500RNGTL-W1-1-021418	280-106426-8	2/14/2018 16:05	2/15/2018	2/26/2018	0.11

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
** ug/L – micrograms/liter (parts per billion)

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Fluorochemical Characterization of Water Samples
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Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-71LAURA-W1-1-021418	280-106426-9	2/14/2018 13:58	2/15/2018	2/26/2018	0.052

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
** ug/L – micrograms/liter (parts per billion)

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Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-3995NIRAD-W1-1-021418	280-106426-10	2/14/2018 16:46	2/15/2018	2/26/2018	0.61

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
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Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-3995NIRAD-W1-2-021418	280-106426-11	2/14/2018 16:47	2/15/2018	2/26/2018	0.53

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
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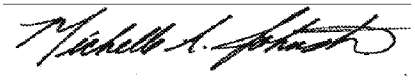
Matrix Spike Recoveries: Acceptable Range: 70%-130%

TestAmerica Sample ID	Matrix Spike Recoveries
280-106426-1	105%

SUBMITTED BY:



2/28/2018

Michelle A. Johnston, Project Manager Date

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Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-5375MRSHR-W1-1-021418	280-106426-12	2/14/2018 9:55	2/15/2018	2/26/2018	0.087

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
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For samples analyzed in duplicate:
If the sample and laboratory duplicate are greater than 5X RL, the relative percent difference (RPD) is less than 20, the average value is reported. If the RPD is greater than 20, the higher value is reported.

If the sample or laboratory duplicate are less than 5X RL, and the absolute difference is less than RL, the average value is reported. If the absolute difference is greater than the RL, the higher value is reported.

Matrix Spike Recoveries: Acceptable Range: 70%-130%

TestAmerica Sample ID	Matrix Spike Recoveries
280-106426-1	105%

SUBMITTED BY:

Michelle A. Johnston

2/28/2018

Michelle A. Johnston, Project Manager Date

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-4013NIRAD-W1-1-021418	280-106426-13	2/14/2018 16:58	2/15/2018	2/26/2018	0.074

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
** ug/L – micrograms/liter (parts per billion)

DEFINITIONS:
Reporting Limit (RL) for the procedure is approximately 0.010ug/L.

RESULTS ARE CALCULATED ACCORDING TO THE FOLLOWING CRITERIA:
For samples analyzed in duplicate:
If the sample and laboratory duplicate are greater than 5X RL, the relative percent difference (RPD) is less than 20, the average value is reported. If the RPD is greater than 20, the higher value is reported.

If the sample or laboratory duplicate are less than 5X RL, and the absolute difference is less than RL, the average value is reported. If the absolute difference is greater than the RL, the higher value is reported.

Matrix Spike Recoveries: Acceptable Range: 70%-130%

TestAmerica Sample ID	Matrix Spike Recoveries
280-106426-1	105%

SUBMITTED BY:

Michelle A. Johnston

2/28/2018

Michelle A. Johnston, Project Manager Date

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Fluorochemical Characterization of Water Samples
Analytical Results

Chemours Sample Identification	TestAmerica Sample Identification	Collection Date/Time	Date Sample Received by TestAmerica	Analysis Date	HFPO-DA# (ug/L**)
FAY-D-4013NIRAD-W1-2-021418	280-106426-14	2/14/2018 17:16	2/15/2018	2/26/2018	<0.010

HFPO-DA – hexafluoropropylene oxide dimer acid, analyzed by method DV-LC-0012, Revision 14.
< = less than the stated value
** ug/L – micrograms/liter (parts per billion)

DEFINITIONS:
Reporting Limit (RL) for the procedure is approximately 0.010ug/L.

RESULTS ARE CALCULATED ACCORDING TO THE FOLLOWING CRITERIA:
For samples analyzed in duplicate:
If the sample and laboratory duplicate are greater than 5X RL, the relative percent difference (RPD) is less than 20, the average value is reported. If the RPD is greater than 20, the higher value is reported.

If the sample or laboratory duplicate are less than 5X RL, and the absolute difference is less than RL, the average value is reported. If the absolute difference is greater than the RL, the higher value is reported.

Matrix Spike Recoveries: Acceptable Range: 70%-130%

TestAmerica Sample ID	Matrix Spike Recoveries
280-106426-1	105%

SUBMITTED BY:

Michelle A. Johnston

2/28/2018

Michelle A. Johnston, Project Manager Date

8321A : HFPO-DA

Lab Sample ID	Client Sample ID	Analyte	Individual Result (ug/L)	Final Result (ug/L)	RL
280-106426-1	FAY-D-3980NIRAD-W1-1-021418	HFPO-DA	0.064	0.063	0.010
280-106426-1 DU	FAY-D-3980NIRAD-W1-1-021418	HFPO-DA	0.063		0.010
280-106426-2	FAY-D-3980NIRAD-W1-1-021418-D	HFPO-DA	0.066	0.066	0.010
280-106426-3	FAY-D-5533MRSHR-W1-1-021418	HFPO-DA	0.057	0.057	0.010
280-106426-4	FAY-D-5617MATTH-W1-1-021418	HFPO-DA	0.028	0.028	0.010
280-106426-5	FAY-D-6520TABOR-W1-1-021418	HFPO-DA	<0.010	<0.010	0.010
280-106426-6	FAY-D-6719TABOR-W1-1-021418	HFPO-DA	0.024	0.024	0.010
280-106426-7	FAY-D-FB-021418	HFPO-DA	<0.010	<0.010	0.010
280-106426-8	FAY-D-5500RNGTL-W1-1-021418	HFPO-DA	0.11	0.11	0.010
280-106426-9	FAY-D-71LAURA-W1-1-021418	HFPO-DA	0.052	0.052	0.010
280-106426-10	FAY-D-3995NIRAD-W1-1-021418	HFPO-DA	0.61	0.61	0.010
280-106426-11	FAY-D-3995NIRAD-W1-2-021418	HFPO-DA	0.53	0.53	0.010
280-106426-12	FAY-D-5375MRSHR-W1-1-021418	HFPO-DA	0.087	0.087	0.010
280-106426-13	FAY-D-4013NIRAD-W1-1-021418	HFPO-DA	0.074	0.074	0.010
280-106426-14	FAY-D-4013NIRAD-W1-2-021418	HFPO-DA	<0.010	<0.010	0.010

(a) Method 8321A

(b) DUP or REP indicates a laboratory duplicate.

(c) If the sample and laboratory duplicate are both greater than 5X the RL and the relative percent difference (RPD) is less than 20, the average value is reported. If the RPD is greater than 20, the higher of the sample and laboratory duplicate value is reported. If the sample and/or laboratory duplicate are less than 5X the RL, and the absolute difference between the sample and laboratory duplicate is less than the RL, the average value is reported. If the absolute difference is greater than the RL, the higher of the sample and laboratory duplicate value is reported. If either the sample or the duplicate result is greater than or equal to the RL and the other is less than the RL, then the higher of the two is reported.

(d) Moisture Determined by ASTM D2216.

(e) Reporting Limit (RL) = The concentration equivalent to the low calibration standard.

Detection Summary

Client: Chemours Company FC, LLC The
Project/Site: FAY-2018 Residential Sampling

TestAmerica Job ID: 280-106426-1

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418 — Lab Sample ID: 280-106426-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPO-DA	0.064		0.010		ug/L	1		8321A	Total/NA

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418-D — Lab Sample ID: 280-106426-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPO-DA	0.066		0.010		ug/L	1		8321A	Total/NA

Client Sample ID: FAY-D-5533MRSHR-W1-1-021418 — Lab Sample ID: 280-106426-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPO-DA	0.057		0.010		ug/L	1		8321A	Total/NA

Client Sample ID: FAY-D-5617MATTH-W1-1-021418 — Lab Sample ID: 280-106426-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPO-DA	0.028		0.010		ug/L	1		8321A	Total/NA

Client Sample ID: FAY-D-6520TABOR-W1-1-021418 — Lab Sample ID: 280-106426-5

No Detections.

Client Sample ID: FAY-D-6719TABOR-W1-1-021418 — Lab Sample ID: 280-106426-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPO-DA	0.024		0.010		ug/L	1		8321A	Total/NA

Client Sample ID: FAY-D-FB-021418 — Lab Sample ID: 280-106426-7

No Detections.

Client Sample ID: FAY-D-5500RNGTL-W1-1-021418 — Lab Sample ID: 280-106426-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPO-DA	0.11		0.010		ug/L	1		8321A	Total/NA

Client Sample ID: FAY-D-71LAURA-W1-1-021418 — Lab Sample ID: 280-106426-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPO-DA	0.052		0.010		ug/L	1		8321A	Total/NA

Client Sample ID: FAY-D-3995NIRAD-W1-1-021418 — Lab Sample ID: 280-106426-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPO-DA	0.61		0.010		ug/L	1		8321A	Total/NA

Client Sample ID: FAY-D-3995NIRAD-W1-2-021418 — Lab Sample ID: 280-106426-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPO-DA	0.53		0.010		ug/L	1		8321A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Chemours Company FC, LLC The
Project/Site: FAY-2018 Residential Sampling

TestAmerica Job ID: 280-106426-1

Client Sample ID: FAY-D-5375MRSHR-W1-1-021418 — Lab Sample ID: 280-106426-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPO-DA	0.087		0.010		ug/L	1		8321A	Total/NA

Client Sample ID: FAY-D-4013NIRAD-W1-1-021418 — Lab Sample ID: 280-106426-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPO-DA	0.074		0.010		ug/L	1		8321A	Total/NA

Client Sample ID: FAY-D-4013NIRAD-W1-2-021418 — Lab Sample ID: 280-106426-14

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418

Lab Sample ID: 280-106426-1

Date Collected: 02/14/18 08:49
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.064		0.010		ug/L		02/24/18 20:22	02/26/18 12:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*108*		*50 - 200*	*02/24/18 20:22*	*02/26/18 12:51*	*1*

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418-D

Lab Sample ID: 280-106426-2

Date Collected: 02/14/18 08:49
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	**0.066**		0.010		ug/L		02/24/18 20:22	02/26/18 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*106*		*50 - 200*	*02/24/18 20:22*	*02/26/18 13:01*	*1*

Client Sample ID: FAY-D-5533MRSHR-W1-1-021418

Lab Sample ID: 280-106426-3

Date Collected: 02/14/18 09:14
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.057		0.010		ug/L		02/24/18 20:22	02/26/18 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*124*		*50 - 200*	*02/24/18 20:22*	*02/26/18 13:04*	*1*

Client Sample ID: FAY-D-5617MATTH-W1-1-021418

Lab Sample ID: 280-106426-4

Date Collected: 02/14/18 10:29
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.028		0.010		ug/L		02/24/18 20:22	02/26/18 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*108*		*50 - 200*	*02/24/18 20:22*	*02/26/18 13:07*	*1*

Client Sample ID: FAY-D-6520TABOR-W1-1-021418

Lab Sample ID: 280-106426-5

Date Collected: 02/14/18 12:48
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	<0.010		0.010		ug/L		02/23/18 21:44	02/26/18 16:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*115*		*50 - 200*	*02/23/18 21:44*	*02/26/18 16:47*	*1*

Client Sample ID: FAY-D-6719TABOR-W1-1-021418

Lab Sample ID: 280-106426-6

Date Collected: 02/14/18 15:42
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.024		0.010		ug/L		02/23/18 21:44	02/26/18 16:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*108*		*50 - 200*	*02/23/18 21:44*	*02/26/18 16:53*	*1*

Client Sample ID: FAY-D-FB-021418

Lab Sample ID: 280-106426-7

Date Collected: 02/14/18 07:15
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	<0.010		0.010		ug/L		02/23/18 21:44	02/26/18 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*119*		*50 - 200*	*02/23/18 21:44*	*02/26/18 16:57*	*1*

Client Sample ID: FAY-D-5500RNGTL-W1-1-021418

Lab Sample ID: 280-106426-8

Date Collected: 02/14/18 16:05
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.11		0.010		ug/L		02/23/18 21:44	02/26/18 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*99*		*50 - 200*	*02/23/18 21:44*	*02/26/18 17:00*	*1*

Client Sample ID: FAY-D-71LAURA-W1-1-021418

Lab Sample ID: 280-106426-9

Date Collected: 02/14/18 13:58
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	**0.052**		0.010		ug/L		02/23/18 21:44	02/26/18 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*103*		*50 - 200*	*02/23/18 21:44*	*02/26/18 17:03*	*1*

Client Sample ID: FAY-D-3995NIRAD-W1-1-021418

Lab Sample ID: 280-106426-10

Date Collected: 02/14/18 16:46
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.61		0.010		ug/L		02/23/18 21:44	02/26/18 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*94*		*50 - 200*	*02/23/18 21:44*	*02/26/18 17:06*	*1*

Client Sample ID: FAY-D-3995NIRAD-W1-2-021418

Lab Sample ID: 280-106426-11

Date Collected: 02/14/18 16:47
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.53		0.010		ug/L		02/24/18 20:22	02/26/18 13:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*50 - 200*	*02/24/18 20:22*	*02/26/18 13:14*	*1*

Client Sample ID: FAY-D-5375MRSHR-W1-1-021418

Lab Sample ID: 280-106426-12

Date Collected: 02/14/18 09:55
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.087		0.010		ug/L		02/24/18 20:22	02/26/18 13:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*83*		*50 - 200*	*02/24/18 20:22*	*02/26/18 13:17*	*1*

Client Sample ID: FAY-D-4013NIRAD-W1-1-021418

Lab Sample ID: 280-106426-13

Date Collected: 02/14/18 16:58
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.074		0.010		ug/L		02/24/18 20:22	02/26/18 13:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*50 - 200*	*02/24/18 20:22*	*02/26/18 13:20*	*1*

Client Sample ID: FAY-D-4013NIRAD-W1-2-021418

Lab Sample ID: 280-106426-14

Date Collected: 02/14/18 17:16
Date Received: 02/15/18 09:30

Matrix: Water

Method: 8321A - HFPO-DA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	<0.010		0.010		ug/L		02/24/18 20:22	02/26/18 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*104*		*50 - 200*	*02/24/18 20:22*	*02/26/18 13:24*	*1*

Default Detection Limits

Client: Chemours Company FC, LLC The
Project/Site: FAY-2018 Residential Sampling

TestAmerica Job ID: 280-106426-1

Method: 8321A - HFPO-DA

Prep: 3535

Analyte	RL	MDL	Units	Method
HFPO-DA	0.010	0.0051	ug/L	8321A

Surrogate Summary

Client: Chemours Company FC, LLC The
Project/Site: FAY-2018 Residential Sampling

TestAmerica Job ID: 280-106426-1

Method: 8321A - HFPO-DA

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	HFPODA (50-200)
280-106426-1	FAY-D-3980NIRAD-W1-1-02141	108
280-106426-1 DU	FAY-D-3980NIRAD-W1-1-02141	113
280-106426-1 MS	FAY-D-3980NIRAD-W1-1-02141	105
280-106426-2	FAY-D-3980NIRAD-W1-1-02141	106
280-106426-3	FAY-D-5533MRSHR-W1-1-021	124
280-106426-4	FAY-D-5617MATTH-W1-1-0214	108
280-106426-5	FAY-D-6520TABOR-W1-1-0214	115
280-106426-6	FAY-D-6719TABOR-W1-1-0214	108
280-106426-7	FAY-D-FB-021418	119
280-106426-8	FAY-D-5500RNGTL-W1-1-0214	99
280-106426-9	FAY-D-71LAURA-W1-1-021418	103
280-106426-10	FAY-D-3995NIRAD-W1-1-02141	94
280-106426-11	FAY-D-3995NIRAD-W1-2-02141	98
280-106426-12	FAY-D-5375MRSHR-W1-1-021	83
280-106426-13	FAY-D-4013NIRAD-W1-1-02141	98
280-106426-14	FAY-D-4013NIRAD-W1-2-02141	104
DLCK 280-404345/13	Lab Control Sample	104
LCS 280-406000/2-A	Lab Control Sample	113
LCS 280-406019/2-A	Lab Control Sample	118
LCSD 280-406000/3-A	Lab Control Sample Dup	116
LCSD 280-406019/3-A	Lab Control Sample Dup	113
LLCS 280-406000/4-A	Lab Control Sample	115
LLCS 280-406019/4-A	Lab Control Sample	116
MB 280-406000/1-A	Method Blank	114
MB 280-406019/1-A	Method Blank	113

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Method: 8321A - HFPO-DA

Lab Sample ID: DLCK 280-404345/13
Matrix: Water
Analysis Batch: 404345

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits		
HFPO-DA			0.250	<0.50		ug/L		90	70 - 130		

Surrogate	*DLCK %Recovery*	*DLCK Qualifier*	*Limits*
13C3 HFPO-DA	*104*		*50 - 200*

Lab Sample ID: MB 280-406000/1-A
Matrix: Water
Analysis Batch: 406060

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 406000

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	<0.010		0.010		ug/L		02/23/18 21:44	02/26/18 15:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*114*		*50 - 200*	*02/23/18 21:44*	*02/26/18 15:41*	*1*

Lab Sample ID: LCS 280-406000/2-A
Matrix: Water
Analysis Batch: 406060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 406000

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
HFPO-DA			0.200	0.189		ug/L		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*113*		*50 - 200*

Lab Sample ID: LCSD 280-406000/3-A
Matrix: Water
Analysis Batch: 406060

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 406000

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA			0.200	0.224		ug/L		112	70 - 130	17	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*116*		*50 - 200*

Lab Sample ID: LLCS 280-406000/4-A
Matrix: Water
Analysis Batch: 406060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 406000

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits		
HFPO-DA			0.0200	0.0182		ug/L		91	70 - 130		

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C3 HFPO-DA	*115*		*50 - 200*

Method: 8321A - HFPO-DA (Continued)

Lab Sample ID: MB 280-406019/1-A
Matrix: Water
Analysis Batch: 406058

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 406019

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	<0.010		0.010		ug/L		02/24/18 20:22	02/26/18 12:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*113*		*50 - 200*	*02/24/18 20:22*	*02/26/18 12:38*	*1*

Lab Sample ID: LCS 280-406019/2-A
Matrix: Water
Analysis Batch: 406058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 406019

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.200	0.171		ug/L		85	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*118*		*50 - 200*

Lab Sample ID: LCSD 280-406019/3-A
Matrix: Water
Analysis Batch: 406058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 406019

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.200	0.180		ug/L		90	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*113*		*50 - 200*

Lab Sample ID: LLCS 280-406019/4-A
Matrix: Water
Analysis Batch: 406058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 406019

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0200	0.0197		ug/L		99	70 - 130

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C3 HFPO-DA	*116*		*50 - 200*

Lab Sample ID: 280-106426-1 MS
Matrix: Water
Analysis Batch: 406058

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418
Prep Type: Total/NA
Prep Batch: 406019

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.064		0.191	0.266		ug/L		105	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*105*		*50 - 200*

Method: 8321A - HFPO-DA (Continued)

Lab Sample ID: 280-106426-1 DU
Matrix: Water
Analysis Batch: 406058

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418
Prep Type: Total/NA
Prep Batch: 406019

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
HFPO-DA	0.064			0.0628		ug/L				2	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
13C3 HFPO-DA	*113*		*50 - 200*

LCMS

Analysis Batch: 404345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
DLCK 280-404345/13	Lab Control Sample	Total/NA	Water	8321A	

Prep Batch: 406000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-106426-5	FAY-D-6520TABOR-W1-1-021418	Total/NA	Water	3535	
280-106426-6	FAY-D-6719TABOR-W1-1-021418	Total/NA	Water	3535	
280-106426-7	FAY-D-FB-021418	Total/NA	Water	3535	
280-106426-8	FAY-D-5500RNGTL-W1-1-021418	Total/NA	Water	3535	
280-106426-9	FAY-D-71LAURA-W1-1-021418	Total/NA	Water	3535	
280-106426-10	FAY-D-3995NIRAD-W1-1-021418	Total/NA	Water	3535	
MB 280-406000/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-406000/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 280-406000/3-A	Lab Control Sample Dup	Total/NA	Water	3535	
LLCS 280-406000/4-A	Lab Control Sample	Total/NA	Water	3535	

Prep Batch: 406019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-106426-1	FAY-D-3980NIRAD-W1-1-021418	Total/NA	Water	3535	
280-106426-2	FAY-D-3980NIRAD-W1-1-021418-D	Total/NA	Water	3535	
280-106426-3	FAY-D-5533MRSHR-W1-1-021418	Total/NA	Water	3535	
280-106426-4	FAY-D-5617MATTH-W1-1-021418	Total/NA	Water	3535	
280-106426-11	FAY-D-3995NIRAD-W1-2-021418	Total/NA	Water	3535	
280-106426-12	FAY-D-5375MRSHR-W1-1-021418	Total/NA	Water	3535	
280-106426-13	FAY-D-4013NIRAD-W1-1-021418	Total/NA	Water	3535	
280-106426-14	FAY-D-4013NIRAD-W1-2-021418	Total/NA	Water	3535	
MB 280-406019/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-406019/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 280-406019/3-A	Lab Control Sample Dup	Total/NA	Water	3535	
LLCS 280-406019/4-A	Lab Control Sample	Total/NA	Water	3535	
280-106426-1 MS	FAY-D-3980NIRAD-W1-1-021418	Total/NA	Water	3535	
280-106426-1 DU	FAY-D-3980NIRAD-W1-1-021418	Total/NA	Water	3535	

Analysis Batch: 406058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-106426-1	FAY-D-3980NIRAD-W1-1-021418	Total/NA	Water	8321A	406019
280-106426-2	FAY-D-3980NIRAD-W1-1-021418-D	Total/NA	Water	8321A	406019
280-106426-3	FAY-D-5533MRSHR-W1-1-021418	Total/NA	Water	8321A	406019
280-106426-4	FAY-D-5617MATTH-W1-1-021418	Total/NA	Water	8321A	406019
280-106426-11	FAY-D-3995NIRAD-W1-2-021418	Total/NA	Water	8321A	406019
280-106426-12	FAY-D-5375MRSHR-W1-1-021418	Total/NA	Water	8321A	406019
280-106426-13	FAY-D-4013NIRAD-W1-1-021418	Total/NA	Water	8321A	406019
280-106426-14	FAY-D-4013NIRAD-W1-2-021418	Total/NA	Water	8321A	406019
MB 280-406019/1-A	Method Blank	Total/NA	Water	8321A	406019
LCS 280-406019/2-A	Lab Control Sample	Total/NA	Water	8321A	406019
LCSD 280-406019/3-A	Lab Control Sample Dup	Total/NA	Water	8321A	406019
LLCS 280-406019/4-A	Lab Control Sample	Total/NA	Water	8321A	406019
280-106426-1 MS	FAY-D-3980NIRAD-W1-1-021418	Total/NA	Water	8321A	406019
280-106426-1 DU	FAY-D-3980NIRAD-W1-1-021418	Total/NA	Water	8321A	406019

LCMS (Continued)

Analysis Batch: 406060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-106426-5	FAY-D-6520TABOR-W1-1-021418	Total/NA	Water	8321A	406000
280-106426-6	FAY-D-6719TABOR-W1-1-021418	Total/NA	Water	8321A	406000
280-106426-7	FAY-D-FB-021418	Total/NA	Water	8321A	406000
280-106426-8	FAY-D-5500RNGTL-W1-1-021418	Total/NA	Water	8321A	406000
280-106426-9	FAY-D-71LAURA-W1-1-021418	Total/NA	Water	8321A	406000
280-106426-10	FAY-D-3995NIRAD-W1-1-021418	Total/NA	Water	8321A	406000
MB 280-406000/1-A	Method Blank	Total/NA	Water	8321A	406000
LCS 280-406000/2-A	Lab Control Sample	Total/NA	Water	8321A	406000
LCSD 280-406000/3-A	Lab Control Sample Dup	Total/NA	Water	8321A	406000
LLCS 280-406000/4-A	Lab Control Sample	Total/NA	Water	8321A	406000

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418

Lab Sample ID: 280-106426-1
Date Collected: 02/14/18 08:49
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			260.1 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 12:51	AGCM	TAL DEN

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418-D

Lab Sample ID: 280-106426-2
Date Collected: 02/14/18 08:49
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			259.3 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 13:01	AGCM	TAL DEN

Client Sample ID: FAY-D-5533MRSHR-W1-1-021418

Lab Sample ID: 280-106426-3
Date Collected: 02/14/18 09:14
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			259.8 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 13:04	AGCM	TAL DEN

Client Sample ID: FAY-D-5617MATTH-W1-1-021418

Lab Sample ID: 280-106426-4
Date Collected: 02/14/18 10:29
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			261.5 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 13:07	AGCM	TAL DEN

Client Sample ID: FAY-D-6520TABOR-W1-1-021418

Lab Sample ID: 280-106426-5
Date Collected: 02/14/18 12:48
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			265.4 mL	5 mL	406000	02/23/18 21:44	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406060	02/26/18 16:47	AGCM	TAL DEN

Client Sample ID: FAY-D-6719TABOR-W1-1-021418

Lab Sample ID: 280-106426-6
Date Collected: 02/14/18 15:42
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			264 mL	5 mL	406000	02/23/18 21:44	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406060	02/26/18 16:53	AGCM	TAL DEN

Client Sample ID: FAY-D-FB-021418

Lab Sample ID: 280-106426-7
Date Collected: 02/14/18 07:15
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			257.9 mL	5 mL	406000	02/23/18 21:44	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406060	02/26/18 16:57	AGCM	TAL DEN

Client Sample ID: FAY-D-5500RNGTL-W1-1-021418

Lab Sample ID: 280-106426-8
Date Collected: 02/14/18 16:05
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			269.6 mL	5 mL	406000	02/23/18 21:44	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406060	02/26/18 17:00	AGCM	TAL DEN

Client Sample ID: FAY-D-71LAURA-W1-1-021418

Lab Sample ID: 280-106426-9
Date Collected: 02/14/18 13:58
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			277.6 mL	5 mL	406000	02/23/18 21:44	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406060	02/26/18 17:03	AGCM	TAL DEN

Client Sample ID: FAY-D-3995NIRAD-W1-1-021418

Lab Sample ID: 280-106426-10
Date Collected: 02/14/18 16:46
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			261.4 mL	5 mL	406000	02/23/18 21:44	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406060	02/26/18 17:06	AGCM	TAL DEN

Client Sample ID: FAY-D-3995NIRAD-W1-2-021418

Lab Sample ID: 280-106426-11
Date Collected: 02/14/18 16:47
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			266.3 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 13:14	AGCM	TAL DEN

Client Sample ID: FAY-D-5375MRSHR-W1-1-021418

Lab Sample ID: 280-106426-12
Date Collected: 02/14/18 09:55
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			250 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 13:17	AGCM	TAL DEN

Client Sample ID: FAY-D-4013NIRAD-W1-1-021418

Lab Sample ID: 280-106426-13
Matrix: Water
Date Collected: 02/14/18 16:58
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			249.5 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 13:20	AGCM	TAL DEN

Client Sample ID: FAY-D-4013NIRAD-W1-2-021418

Lab Sample ID: 280-106426-14
Matrix: Water
Date Collected: 02/14/18 17:16
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			267.2 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 13:24	AGCM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-406000/1-A
Matrix: Water
Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			250 mL	5 mL	406000	02/23/18 21:44	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406060	02/26/18 15:41	AGCM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-406019/1-A
Matrix: Water
Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			250 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 12:38	AGCM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: DLCK 280-404345/13
Matrix: Water
Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8321A		1			404345	02/08/18 13:38	AGCM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-406000/2-A
Matrix: Water
Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			250 mL	5 mL	406000	02/23/18 21:44	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406060	02/26/18 15:45	AGCM	TAL DEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 280-406019/2-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			250 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 12:41	AGCM	TAL DEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 280-406000/3-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			250 mL	5 mL	406000	02/23/18 21:44	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406060	02/26/18 15:48	AGCM	TAL DEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 280-406019/3-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			250 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 12:45	AGCM	TAL DEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LLCS 280-406000/4-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			250 mL	5 mL	406000	02/23/18 21:44	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406060	02/26/18 15:51	AGCM	TAL DEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LLCS 280-406019/4-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			250 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 12:48	AGCM	TAL DEN

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418
Lab Sample ID: 280-106426-1 MS

Date Collected: 02/14/18 08:49
Matrix: Water
Date Received: 02/15/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			261.1 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 12:58	AGCM	TAL DEN

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418

Lab Sample ID: 280-106426-1 DU

Date Collected: 02/14/18 08:49
Date Received: 02/15/18 09:30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			259 mL	5 mL	406019	02/24/18 20:22	CDC	TAL DEN
Total/NA	Analysis	8321A		1			406058	02/26/18 12:54	AGCM	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Chemours Company FC, LLC The
TestAmerica Job ID: 280-106426-1
Project/Site: FAY-2018 Residential Sampling

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
North Carolina (WW/SW)	State Program	4	358	12-31-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8321A	3535	Water	HFPO-DA

Method Summary

Client: Chemours Company FC, LLC The
Project/Site: FAY-2018 Residential Sampling

TestAmerica Job ID: 280-106426-1

Method	Method Description	Protocol	Laboratory
8321A	HFPO-DA	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Chemours Company FC, LLC The
Project/Site: FAY-2018 Residential Sampling

TestAmerica Job ID: 280-106426-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-106426-1	FAY-D-3980NIRAD-W1-1-021418	Water	02/14/18 08:49	02/15/18 09:30
280-106426-2	FAY-D-3980NIRAD-W1-1-021418-D	Water	02/14/18 08:49	02/15/18 09:30
280-106426-3	FAY-D-5533MRSHR-W1-1-021418	Water	02/14/18 09:14	02/15/18 09:30
280-106426-4	FAY-D-5617MATTH-W1-1-021418	Water	02/14/18 10:29	02/15/18 09:30
280-106426-5	FAY-D-6520TABOR-W1-1-021418	Water	02/14/18 12:48	02/15/18 09:30
280-106426-6	FAY-D-6719TABOR-W1-1-021418	Water	02/14/18 15:42	02/15/18 09:30
280-106426-7	FAY-D-FB-021418	Water	02/14/18 07:15	02/15/18 09:30
280-106426-8	FAY-D-5500RNGTL-W1-1-021418	Water	02/14/18 16:05	02/15/18 09:30
280-106426-9	FAY-D-71LAURA-W1-1-021418	Water	02/14/18 13:58	02/15/18 09:30
280-106426-10	FAY-D-3995NIRAD-W1-1-021418	Water	02/14/18 16:46	02/15/18 09:30
280-106426-11	FAY-D-3995NIRAD-W1-2-021418	Water	02/14/18 16:47	02/15/18 09:30
280-106426-12	FAY-D-5375MRSHR-W1-1-021418	Water	02/14/18 09:55	02/15/18 09:30
280-106426-13	FAY-D-4013NIRAD-W1-1-021418	Water	02/14/18 16:58	02/15/18 09:30
280-106426-14	FAY-D-4013NIRAD-W1-2-021418	Water	02/14/18 17:16	02/15/18 09:30

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Instrument ID: LC_LCMS7 Analysis Batch Number: 404345

Lab Sample ID: STD001 280-404345/3 IC Client Sample ID:

Date Analyzed: 02/08/18 13:05 Lab File ID: hfpo718B08034.d GC Column: Synergi Hydro ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HFPO-DA	1.06	Assign Peak	meyera	02/08/18 15:19

Lab Sample ID: STD002 280-404345/4 IC Client Sample ID:

Date Analyzed: 02/08/18 13:08 Lab File ID: hfpo718B08035.d GC Column: Synergi Hydro ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HFPO-DA	1.06	Baseline	meyera	02/08/18 15:19

Lab Sample ID: DLCK 280-404345/13 Client Sample ID:

Date Analyzed: 02/08/18 13:38 Lab File ID: hfpo718B08044.d GC Column: Synergi Hydro ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HFPO-DA	1.06	Baseline	meyera	02/08/18 15:20

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Instrument ID: LC_LCMS7 Analysis Batch Number: 406060

Lab Sample ID: MB 280-406000/1-A Client Sample ID:

Date Analyzed: 02/26/18 15:41 Lab File ID: hfpo718B26143.d GC Column: Synergi Hydro ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C3 HFPO-DA	0.92	Baseline	meyera	02/27/18 07:45

Lab Sample ID: LCS 280-406000/2-A Client Sample ID:

Date Analyzed: 02/26/18 15:45 Lab File ID: hfpo718B26144.d GC Column: Synergi Hydro ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C3 HFPO-DA	0.87	Baseline	meyera	02/27/18 07:45
HFPO-DA	0.88	Baseline	meyera	02/27/18 07:45

Lab Sample ID: LLCS 280-406000/4-A Client Sample ID:

Date Analyzed: 02/26/18 15:51 Lab File ID: hfpo718B26146.d GC Column: Synergi Hydro ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HFPO-DA	0.88	Baseline	meyera	02/27/18 07:45

Lab Sample ID: 280-106426-9 Client Sample ID: FAY-D-71LAURA-W1-1-021418

Date Analyzed: 02/26/18 17:03 Lab File ID: hfpo718B26168.d GC Column: Synergi Hydro ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HFPO-DA	0.88	Baseline	meyera	02/27/18 07:48

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL
							13C3 HFPO-DA (IS)	0.5 ug/mL
.13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
							13C3 HFPO-DA (IS)	50 ug/mL
HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
.HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_CAL-0_00032	02/22/18	02/08/18	PFC_Dill_Solvent, Lot 00016	1 mL	HFPO I.S._00008	20 uL	13C3 HFPO-DA	10 ug/L
.HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL
..13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
HFPO_CAL-1_00032	02/22/18	02/08/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00008	20 uL	13C3 HFPO-DA	10 ug/L
							13C3 HFPO-DA (IS)	10 ug/L
					HFPO Spike_00004	0.5 uL	HFPO-DA	0.25 ug/L
.HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL
							13C3 HFPO-DA (IS)	0.5 ug/mL
..13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
							13C3 HFPO-DA (IS)	50 ug/mL
.HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
..HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_CAL-2_00033	02/22/18	02/08/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00008	20 uL	13C3 HFPO-DA	10 ug/L
							13C3 HFPO-DA (IS)	10 ug/L
					HFPO Spike_00004	1 uL	HFPO-DA	0.5 ug/L
.HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL
							13C3 HFPO-DA (IS)	0.5 ug/mL
..13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
							13C3 HFPO-DA (IS)	50 ug/mL
.HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
..HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_CAL-3_00032	02/22/18	02/08/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00008	20 uL	13C3 HFPO-DA	10 ug/L
							13C3 HFPO-DA (IS)	10 ug/L
					HFPO Spike_00004	2 uL	HFPO-DA	1 ug/L
.HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL
							13C3 HFPO-DA (IS)	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
							13C3 HFPO-DA (IS)	50 ug/mL
.HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
..HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_CAL-4_00032	02/22/18	02/08/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00008	20 uL	13C3 HFPO-DA	10 ug/L
							13C3 HFPO-DA (IS)	10 ug/L
					HFPO Spike_00004	4 uL	HFPO-DA	2 ug/L
.HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL
							13C3 HFPO-DA (IS)	0.5 ug/mL
..13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
							13C3 HFPO-DA (IS)	50 ug/mL
.HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
..HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_CAL-5_00080	02/22/18	02/08/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00008	20 uL	13C3 HFPO-DA	10 ug/L
							13C3 HFPO-DA (IS)	10 ug/L
					HFPO Spike_00004	10 uL	HFPO-DA	5 ug/L
.HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL
							13C3 HFPO-DA (IS)	0.5 ug/mL
..13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
							13C3 HFPO-DA (IS)	50 ug/mL
.HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
..HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_CAL-5_00082	03/09/18	02/23/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00009	20 uL	13C3 HFPO-DA	10 ug/L
					HFPO Spike_00004	10 uL	HFPO-DA	5 ug/L
.HFPO I.S._00009	02/20/19	02/20/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00009	1 mL	13C3 HFPO-DA	0.5 ug/mL
..13C3 HFPO-DA_00009	02/20/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
.HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
..HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_CAL-6_00080	02/22/18	02/08/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00008	20 uL	13C3 HFPO-DA	10 ug/L
							13C3 HFPO-DA (IS)	10 ug/L
					HFPO Spike_00004	20 uL	HFPO-DA	10 ug/L
.HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C3 HFPO-DA (IS)	0.5 ug/mL
..13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
							13C3 HFPO-DA (IS)	50 ug/mL
.HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
..HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_CAL-6_00082	03/09/18	02/23/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00009	20 uL	13C3 HFPO-DA	10 ug/L
					HFPO Spike_00004	20 uL	HFPO-DA	10 ug/L
.HFPO I.S._00009	02/20/19	02/20/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00009	1 mL	13C3 HFPO-DA	0.5 ug/mL
..13C3 HFPO-DA_00009	02/20/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
.HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
..HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_CAL-7_00032	02/22/18	02/08/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00008	20 uL	13C3 HFPO-DA	10 ug/L
							13C3 HFPO-DA (IS)	10 ug/L
					HFPO Spike_00004	50 uL	HFPO-DA	25 ug/L
.HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL
							13C3 HFPO-DA (IS)	0.5 ug/mL
..13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
							13C3 HFPO-DA (IS)	50 ug/mL
.HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
..HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_CAL-8_00032	02/22/18	02/08/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00008	20 uL	13C3 HFPO-DA	10 ug/L
							13C3 HFPO-DA (IS)	10 ug/L
					HFPO Spike_00004	100 uL	HFPO-DA	50 ug/L
.HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL
							13C3 HFPO-DA (IS)	0.5 ug/mL
..13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
							13C3 HFPO-DA (IS)	50 ug/mL
.HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
..HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_CAL-9_00001	02/22/18	02/08/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00008	20 uL	13C3 HFPO-DA	10 ug/L
							13C3 HFPO-DA (IS)	10 ug/L
					HFPO Spike_00004	200 uL	HFPO-DA	100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL
							13C3 HFPO-DA (IS)	0.5 ug/mL
..13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
							13C3 HFPO-DA (IS)	50 ug/mL
.HFPO Spike_00004	10/30/18	10/30/17	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	HFPO-DA_00004	1 mL	HFPO-DA	0.5 ug/mL
..HFPO-DA_00004	07/13/20	Wellington Laboratories, Lot HFPODA0717			(Purchased Reagent)		HFPO-DA	50 ug/mL
HFPO_ICV_00034	02/22/18	02/08/18	80:20 Methanol : H2O, Lot 00016	1 mL	HFPO I.S._00008	20 uL	13C3 HFPO-DA	10 ug/L
					HFPO ICV_00001	10 uL	HFPO-DA	1.95009 ug/L
.HFPO I.S._00008	12/12/18	01/30/18	LCMS Grade MeOH, Lot LCMS_MeOH_00110	100 mL	13C3 HFPO-DA_00008	1 mL	13C3 HFPO-DA	0.5 ug/mL
..13C3 HFPO-DA_00008	01/30/19	Wellington Laboratories, Lot M3HFPOADA0817			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
.HFPO ICV_00001	11/03/18	11/03/17	Methanol, Lot 12345	100 mL	HFPO SS stock_00002	20 uL	HFPO-DA	0.195009 ug/mL
..HFPO SS stock_00002	11/03/18	11/03/17	Methanol, Lot 12345	500 mL	HFPO SS_00003	0.5026 g	HFPO-DA	975.044 ug/mL
...HFPO SS_00003	05/23/21	Synquest Laboratories, Lot Q141-128			(Purchased Reagent)		HFPO-DA	97 %

Reagent

13C3 HFPO-DA_00008

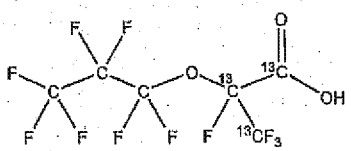
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M3HFPO-DA **LOT NUMBER:** M3HFPODA0817

COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-$^{13}C_3$-propanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_3{}^{12}C_3HF_{11}O_3$	**MOLECULAR WEIGHT:**	333.03
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	08/17/2017		
EXPIRY DATE: (mm/dd/yyyy)	08/17/2020		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 1.5% of two constitutional isomers.
- Product is commercially known as GenX.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/25/2017 (mm/dd/yyyy)

B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

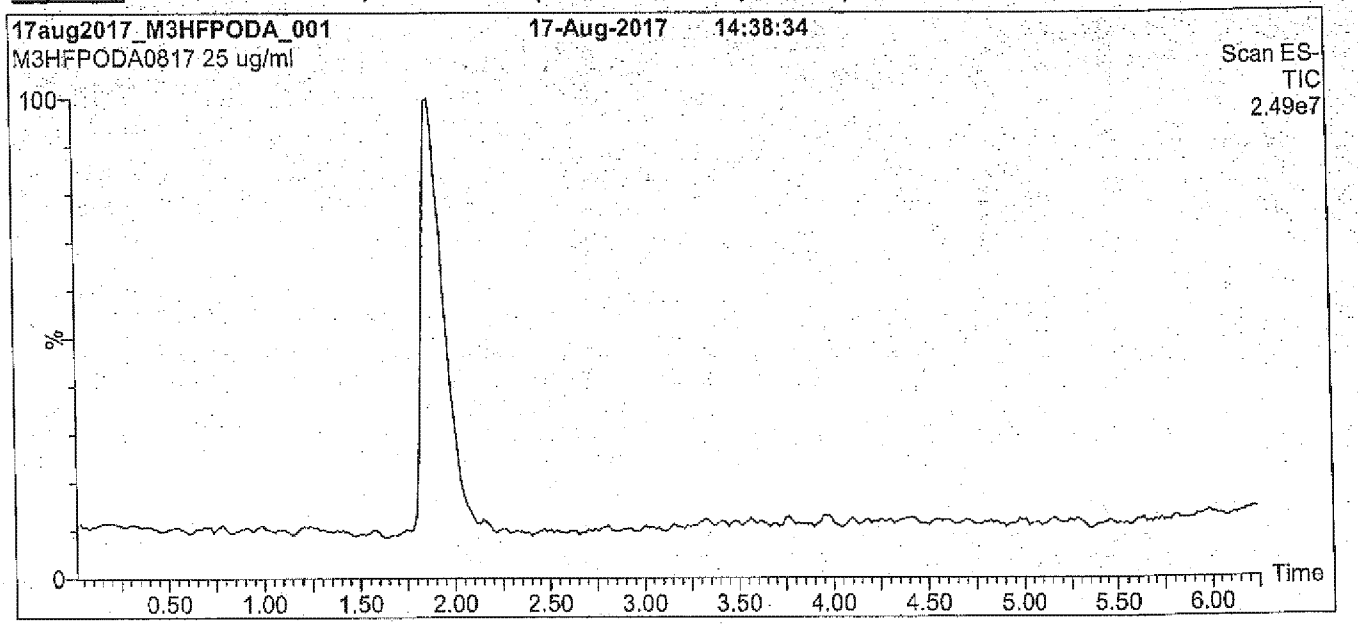
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

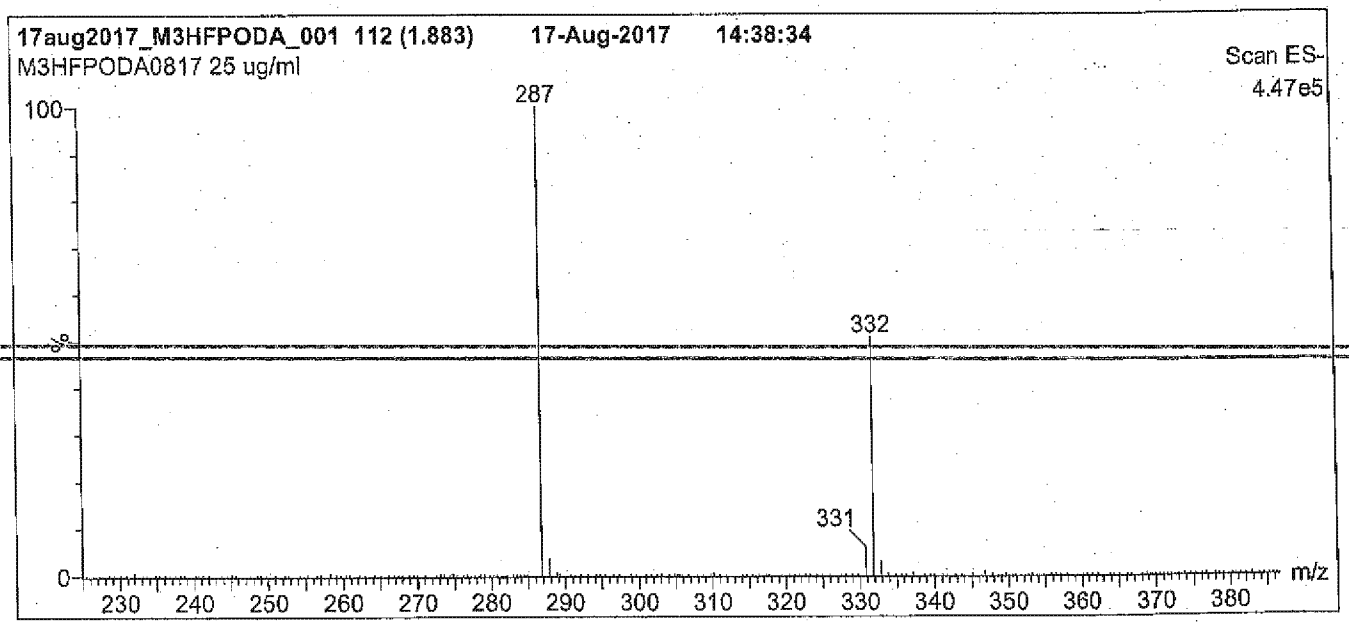
CALA Testing Accreditation No. A3226

ANAB ACCREDITED ISO 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **M3HFPO-DA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: Waters Acquity Ultra Performance LC
MS: Micromass Quattro *micro* API MS

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% MeOH / 45% H_2O with 10 mM NH_4OAc buffer
Ramp to 90% organic over 7.5 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.

Time: 10 min

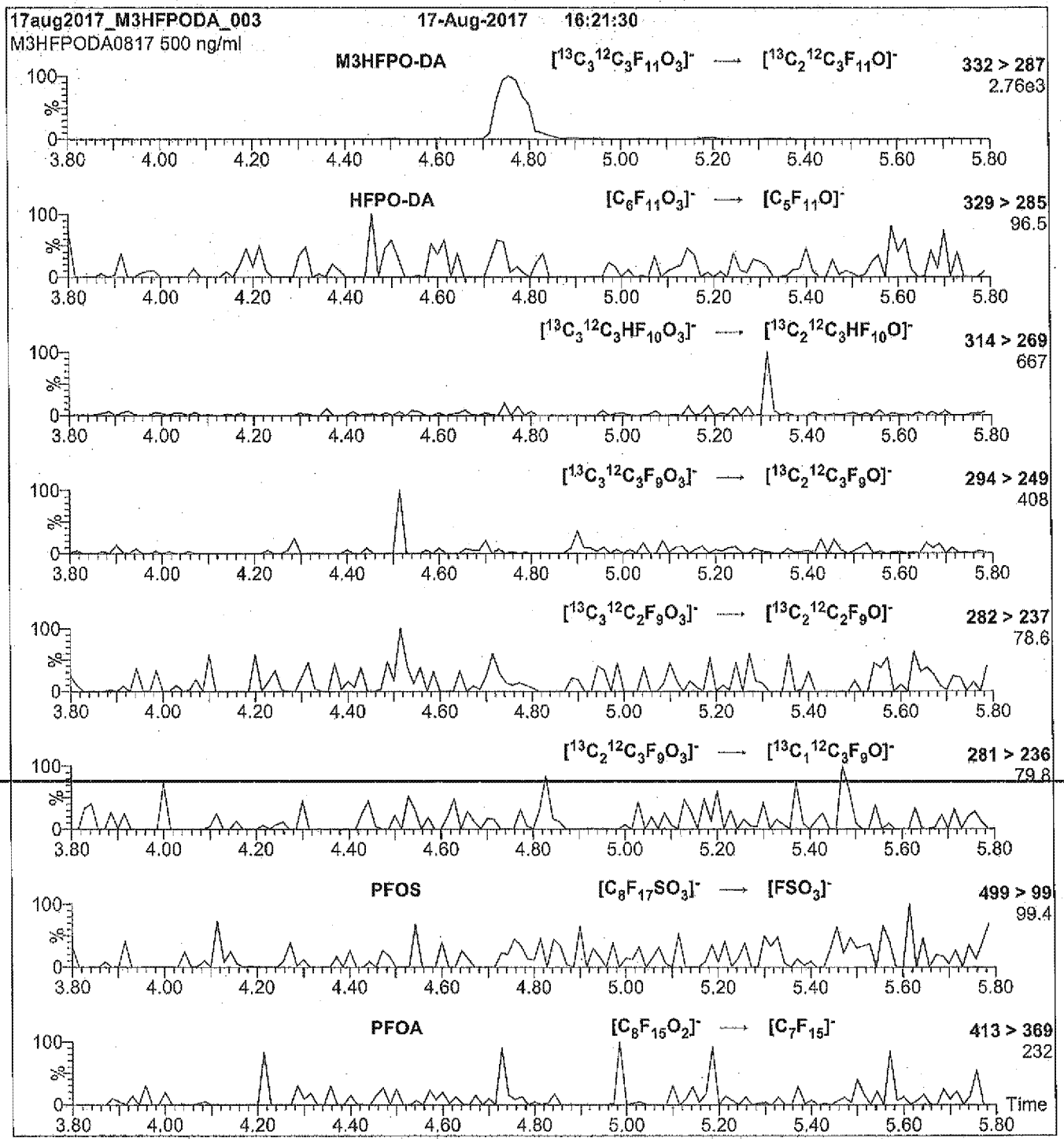
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 10.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M3HFPO-DA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M3HFPO-DA)

Mobile phase: Isocratic 80% MeOH / 20% H_2O with 10 mM NH_4OAc buffer

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.24e-3
Collision Energy (eV) = 5

Reagent

13C3 HFPO-DA_00009

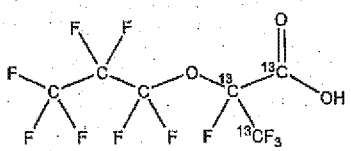
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M3HFPO-DA **LOT NUMBER:** M3HFPODA0817

COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-$^{13}C_3$-propanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_3{}^{12}C_3HF_{11}O_3$	**MOLECULAR WEIGHT:**	333.03
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	08/17/2017		
EXPIRY DATE: (mm/dd/yyyy)	08/17/2020		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 1.5% of two constitutional isomers.
- Product is commercially known as GenX.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/25/2017 (mm/dd/yyyy)

B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A3226

ANAB ACCREDITED ISO 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

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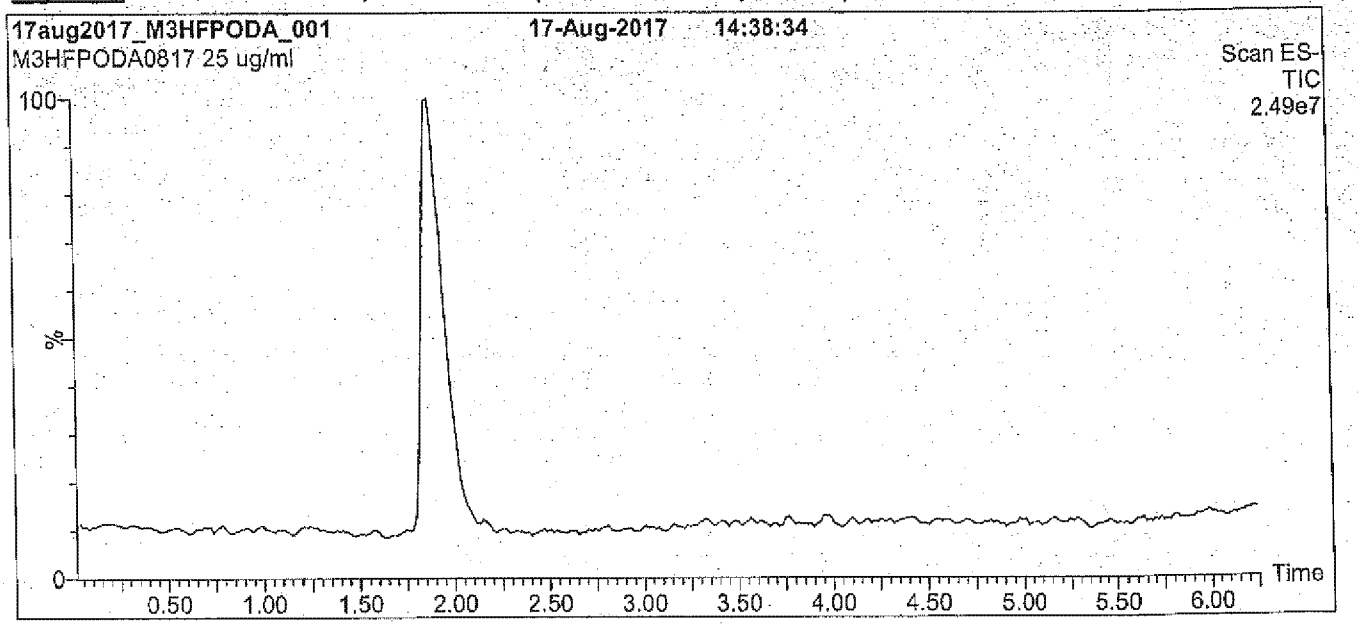
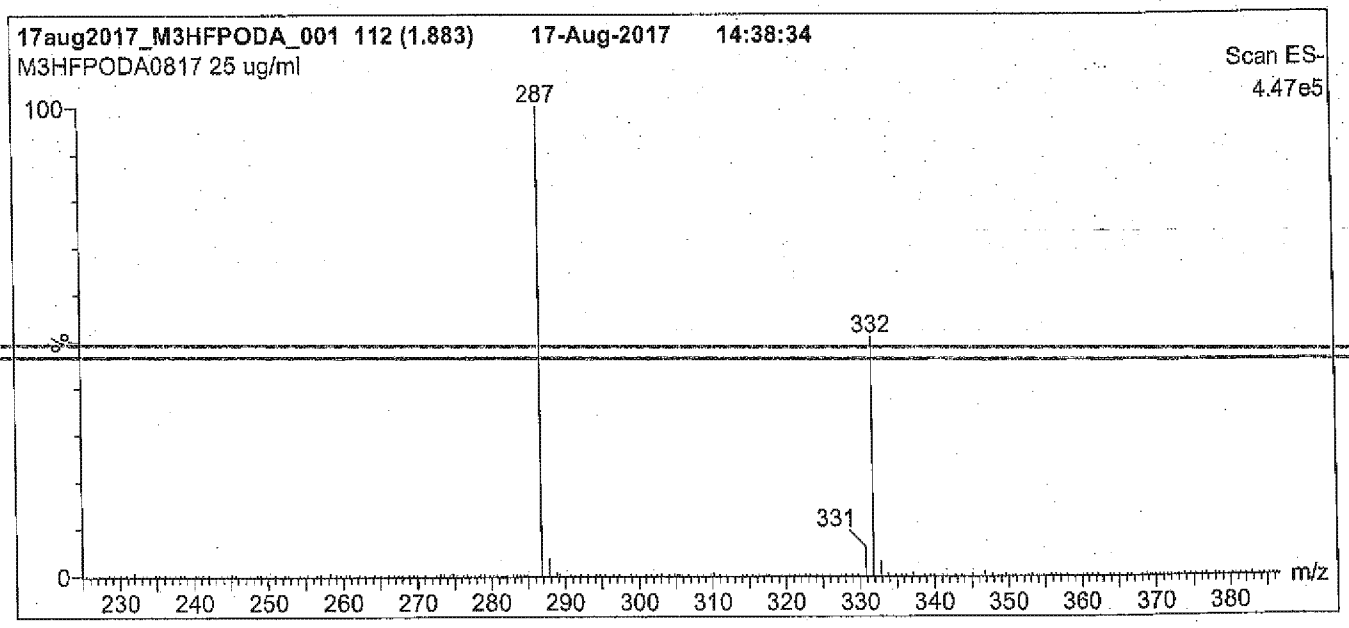
Figure 1: **M3HFPO-DA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: Waters Acquity Ultra Performance LC
MS: Micromass Quattro *micro* API MS

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1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% MeOH / 45% H_2O with 10 mM NH_4OAc buffer
Ramp to 90% organic over 7.5 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.

Time: 10 min

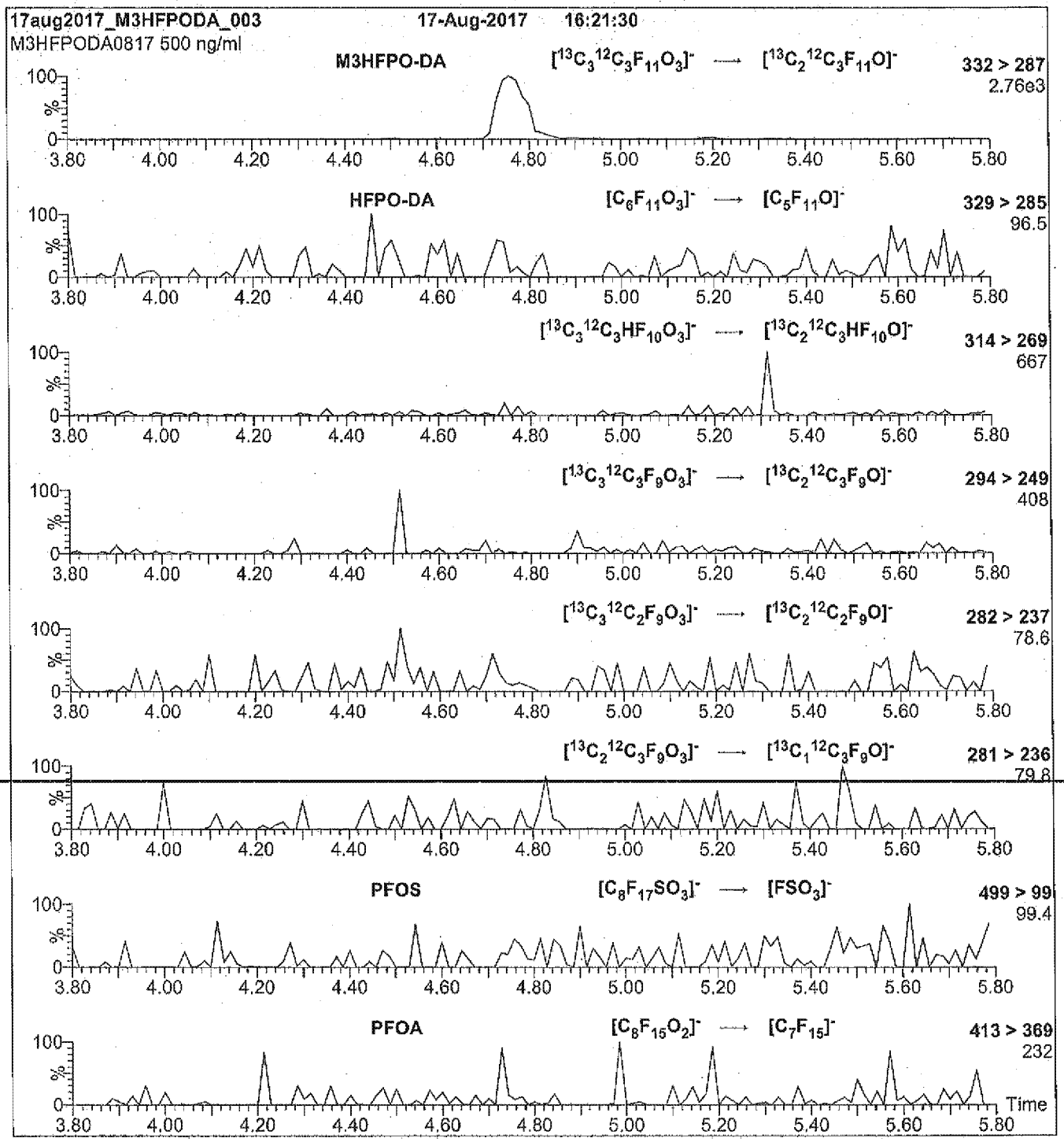
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 10.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M3HFPO-DA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M3HFPO-DA)

Mobile phase: Isocratic 80% MeOH / 20% H_2O with 10 mM NH_4OAc buffer

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.24e-3
Collision Energy (eV) = 5

Reagent

HFPO-DA_00004

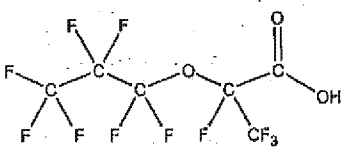
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: HFPO-DA **LOT NUMBER:** HFPODA0717

COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid

STRUCTURE: **CAS #:** 13252-13-6



MOLECULAR FORMULA:	$C_6HF_{11}O_3$	**MOLECULAR WEIGHT:**	330.05
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	07/13/2017		
EXPIRY DATE: (mm/dd/yyyy)	07/13/2020		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

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Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Product is commercially known as GenX.

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Certified By: _____ **Date:** 07/14/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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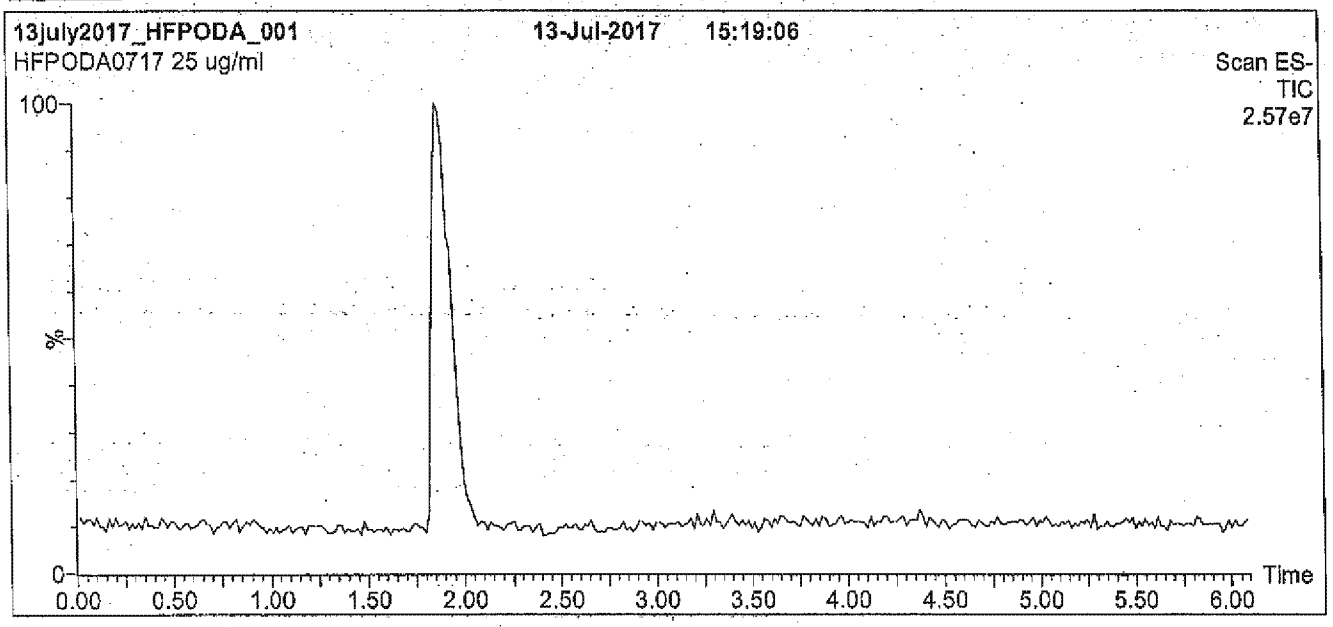
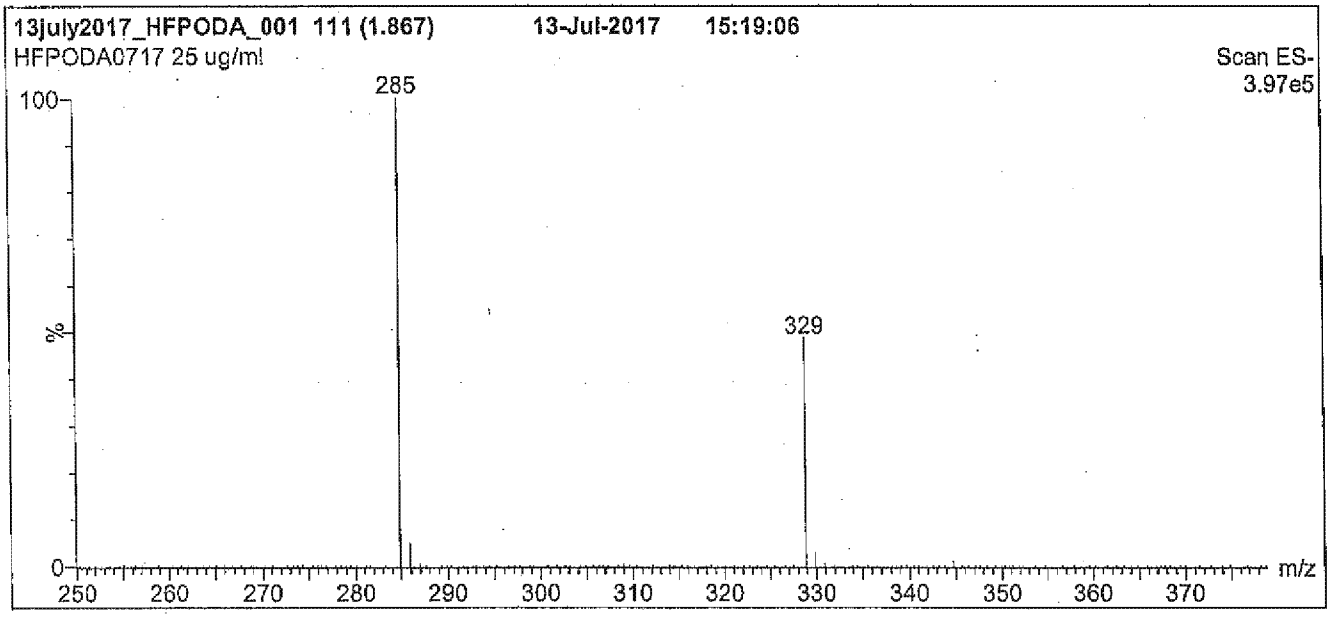
Figure 1: **HFPO-DA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% MeOH / 45% H_2O with 10 mM NH_4OAc buffer
Ramp to 90% organic over 7.5 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.

Time: 10 min

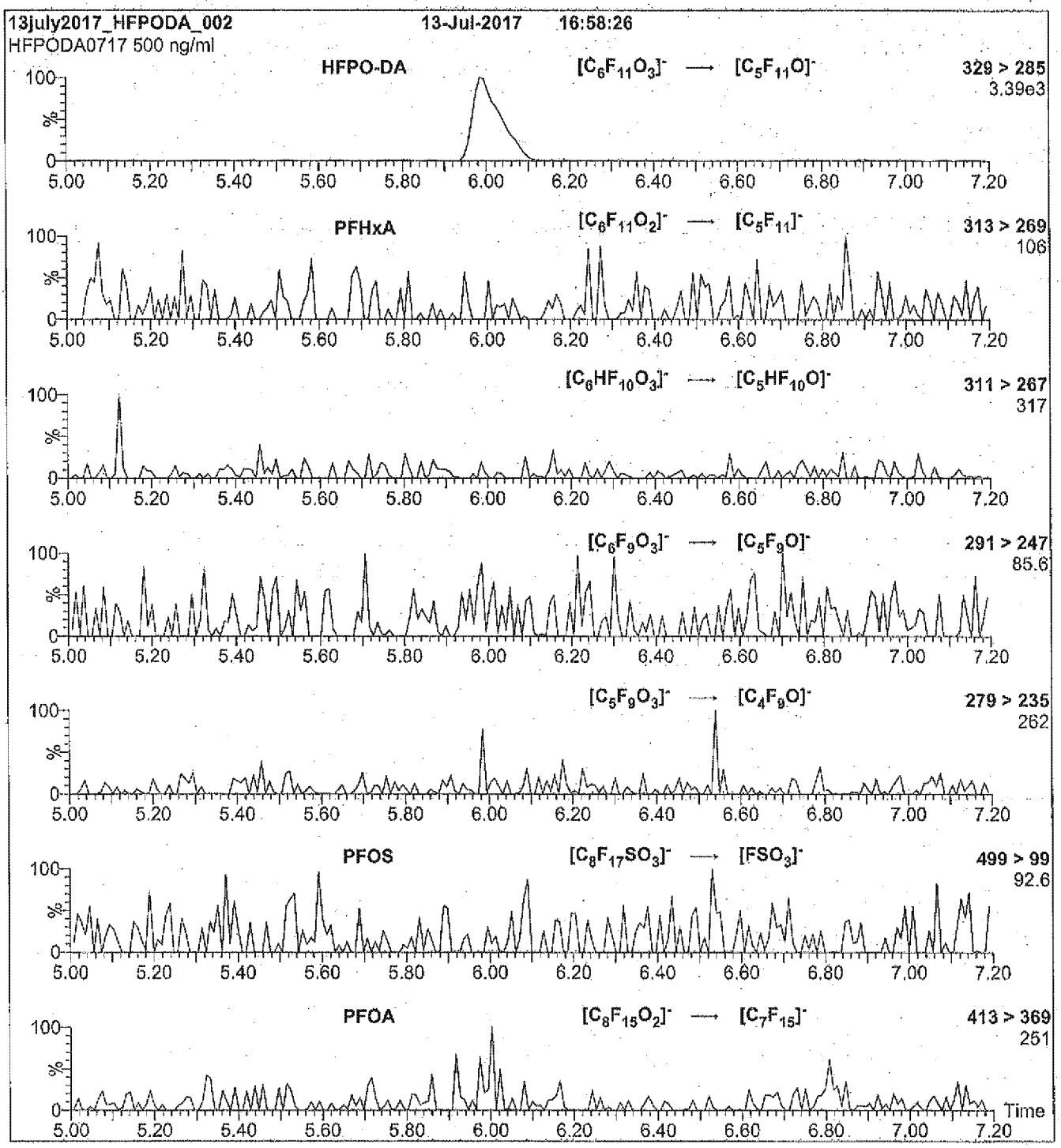
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 10.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 700

Figure 2: **HFPO-DA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (600 ng/ml HFPO-DA)

Mobile phase: Isocratic 80% MeOH / 20% H_2O with 10 mM NH_4OAc buffer

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.20e-3
Collision Energy (eV) = 5

8321A_HFPO_Du

HFPO-DA

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Synergi Hyd ID:

Client Sample ID	Lab Sample ID	HFPODA #
FAY-D-3980NIRAD-W1-1-021418	280-106426-1	108
FAY-D-3980NIRAD-W1-1-021418-D	280-106426-2	106
FAY-D-5533MRSHR-W1-1-021418	280-106426-3	124
FAY-D-5617MATTH-W1-1-021418	280-106426-4	108
FAY-D-6520TABOR-W1-1-021418	280-106426-5	115
FAY-D-6719TABOR-W1-1-021418	280-106426-6	108
FAY-D-FB-021418	280-106426-7	119
FAY-D-5500RNGTL-W1-1-021418	280-106426-8	99
FAY-D-71LAURA-W1-1-021418	280-106426-9	103
FAY-D-3995NIRAD-W1-1-021418	280-106426-10	94
FAY-D-3995NIRAD-W1-2-021418	280-106426-11	98
FAY-D-5375MRSHR-W1-1-021418	280-106426-12	83
FAY-D-4013NIRAD-W1-1-021418	280-106426-13	98
FAY-D-4013NIRAD-W1-2-021418	280-106426-14	104
	MB 280-406000/1-A	114
	MB 280-406019/1-A	113
	LCS 280-406000/2-A	113
	LCS 280-406019/2-A	118
	LCSD 280-406000/3-A	116
	LCSD 280-406019/3-A	113
	LLCS 280-406000/4-A	115
	LLCS 280-406019/4-A	116
FAY-D-3980NIRAD-W1-1-021418 MS	280-106426-1 MS	105
FAY-D-3980NIRAD-W1-1-021418 DU	280-106426-1 DU	113
	DLCK 280-404345/13	104

	QC LIMITS
HFPODA = 13C3 HFPO-DA	50-200

Column to be used to flag recovery values

FORM II 8321A

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Matrix: Water Level: Low Lab File ID: hfpo718B26144.d

Lab ID: LCS 280-406000/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.200	0.189	95	70-130	

Column to be used to flag recovery and RPD values

FORM III 8321A

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Matrix: Water Level: Low Lab File ID: hfpo718B26088.d

Lab ID: LCS 280-406019/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.200	0.171	85	70-130	

Column to be used to flag recovery and RPD values

FORM III 8321A

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Matrix: Water Level: Low Lab File ID: hfpo718B26145.d

Lab ID: LCSD 280-406000/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
HFPO-DA	0.200	0.224	112	17	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8321A

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Matrix: Water Level: Low Lab File ID: hfpo718B26089.d

Lab ID: LCSD 280-406019/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
HFPO-DA	0.200	0.180	90	5	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8321A

FORM III
LCMS LOW LEVEL CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Matrix: Water Level: Low Lab File ID: hfpo718B26146.d

Lab ID: LLCS 280-406000/4-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LLCS CONCENTRATION (ug/L)	LLCS % REC	QC LIMITS REC	#
HFPO-DA	0.0200	0.0182	91	70-130	

Column to be used to flag recovery and RPD values

FORM III 8321A

FORM III
LCMS LOW LEVEL CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Matrix: Water Level: Low Lab File ID: hfpo718B26090.d

Lab ID: LLCS 280-406019/4-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LLCS CONCENTRATION (ug/L)	LLCS % REC	QC LIMITS REC	#
HFPO-DA	0.0200	0.0197	99	70-130	

Column to be used to flag recovery and RPD values

FORM III 8321A

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Matrix: Water Level: Low Lab File ID: hfpo718B26093.d

Lab ID: 280-106426-1 MS Client ID: FAY-D-3980NIRAD-W1-1-021418 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
HFPO-DA	0.191	0.064	0.266	105	70-130	

Column to be used to flag recovery and RPD values

FORM III 8321A

FORM III
LCMS DETECTION LIMIT CHECK STANDARD RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Matrix: Water Level: Low Lab File ID: hfpo718B08044.d

Lab ID: DLCK 280-404345/13 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	DLCK CONCENTRATION (ug/L)	DLCK % REC	QC LIMITS REC	#
HFPO-DA	0.250	<0.50	90	70-130	

Column to be used to flag recovery and RPD values

FORM III 8321A

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Lab File ID: hfpo718B26143.d Lab Sample ID: MB 280-406000/1-A

Matrix: Water Date Extracted: 02/23/2018 21:44

Instrument ID: LC_LCMS7 Date Analyzed: 02/26/2018 15:41

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-406000/2-A	hfpo718B26144.d	02/26/2018 15:45
	LCSD 280-406000/3-A	hfpo718B26145.d	02/26/2018 15:48
	LLCS 280-406000/4-A	hfpo718B26146.d	02/26/2018 15:51
FAY-D-6520TABOR-W1-1-021418	280-106426-5	hfpo718B26163.d	02/26/2018 16:47
FAY-D-6719TABOR-W1-1-021418	280-106426-6	hfpo718B26165.d	02/26/2018 16:53
FAY-D-FB-021418	280-106426-7	hfpo718B26166.d	02/26/2018 16:57
FAY-D-5500RNGTL-W1-1-021418	280-106426-8	hfpo718B26167.d	02/26/2018 17:00
FAY-D-71LAURA-W1-1-021418	280-106426-9	hfpo718B26168.d	02/26/2018 17:03
FAY-D-3995NIRAD-W1-1-021418	280-106426-10	hfpo718B26169.d	02/26/2018 17:06

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Lab File ID: hfpo718B26087.d Lab Sample ID: MB 280-406019/1-A

Matrix: Water Date Extracted: 02/24/2018 20:22

Instrument ID: LC_LCMS7 Date Analyzed: 02/26/2018 12:38

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-406019/2-A	hfpo718B26088.d	02/26/2018 12:41
	LCSD 280-406019/3-A	hfpo718B26089.d	02/26/2018 12:45
	LLCS 280-406019/4-A	hfpo718B26090.d	02/26/2018 12:48
FAY-D-3980NIRAD-W1-1-021418	280-106426-1	hfpo718B26091.d	02/26/2018 12:51
FAY-D-3980NIRAD-W1-1-021418 DU	280-106426-1 DU	hfpo718B26092.d	02/26/2018 12:54
FAY-D-3980NIRAD-W1-1-021418 MS	280-106426-1 MS	hfpo718B26093.d	02/26/2018 12:58
FAY-D-3980NIRAD-W1-1-021418-D	280-106426-2	hfpo718B26094.d	02/26/2018 13:01
FAY-D-5533MRSHR-W1-1-021418	280-106426-3	hfpo718B26095.d	02/26/2018 13:04
FAY-D-5617MATTH-W1-1-021418	280-106426-4	hfpo718B26096.d	02/26/2018 13:07
FAY-D-3995NIRAD-W1-2-021418	280-106426-11	hfpo718B26098.d	02/26/2018 13:14
FAY-D-5375MRSHR-W1-1-021418	280-106426-12	hfpo718B26099.d	02/26/2018 13:17
FAY-D-4013NIRAD-W1-1-021418	280-106426-13	hfpo718B26100.d	02/26/2018 13:20
FAY-D-4013NIRAD-W1-2-021418	280-106426-14	hfpo718B26101.d	02/26/2018 13:24

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418 Lab Sample ID: 280-106426-1

Matrix: Water Lab File ID: hfpo718B26091.d

Analysis Method: 8321A Date Collected: 02/14/2018 08:49

Extraction Method: 3535 Date Extracted: 02/24/2018 20:22

Sample wt/vol: 260.1(mL) Date Analyzed: 02/26/2018 12:51

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: Synergi Hydro ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.064		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	108		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26091.d
Lims ID: 280-106426-C-1-A
Client ID: FAY-D-3980NIRAD-W1-1-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 12:51:34 ALS Bottle#: 22 Worklist Smp#: 81
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-C-1-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:05

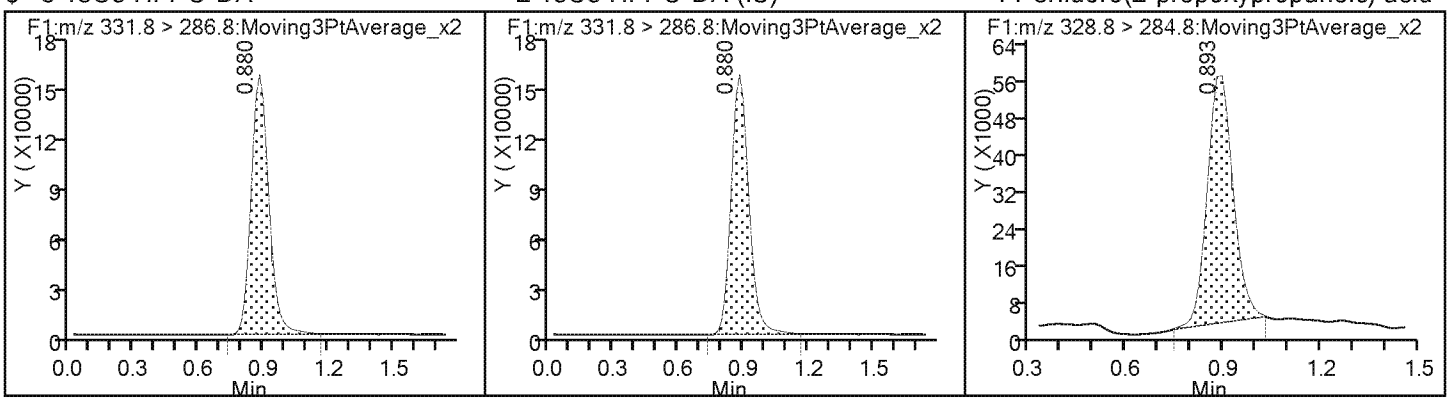
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.880	1.045	-0.165	1.000	808629	10.8	1203	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.880	1.045	-0.165		808629	10.0	1203	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.893	1.056	-0.163	1.000	289863	3.34	29.7	

Report Date: 26-Feb-2018 13:46:36 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26091.d				
Injection Date:	26-Feb-2018 12:51:34	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-C-1-A	Lab Sample ID:	280-106426-1		
Client ID:	FAY-D-3980NIRAD-W1-1-021418				
Operator ID:	JBH	ALS Bottle#:	22	Worklist Smp#:	81
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26091.d				
Lims ID:	280-106426-C-1-A				
Client ID:	FAY-D-3980NIRAD-W1-1-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 12:51:34	ALS Bottle#:	22	Worklist Smp#:	81
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-C-1-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 13:46:25	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	10.8	108.31

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418-D | Lab Sample ID: 280-106426-2

Matrix: Water | Lab File ID: hfpo718B26094.d

Analysis Method: 8321A | Date Collected: 02/14/2018 08:49

Extraction Method: 3535 | Date Extracted: 02/24/2018 20:22

Sample wt/vol: 259.3(mL) | Date Analyzed: 02/26/2018 13:01

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.066		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	106		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26094.d
Lims ID: 280-106426-C-2-A
Client ID: FAY-D-3980NIRAD-W1-1-021418-D
Sample Type: Client
Inject. Date: 26-Feb-2018 13:01:21 ALS Bottle#: 25 Worklist Smp#: 84
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-C-2-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:11

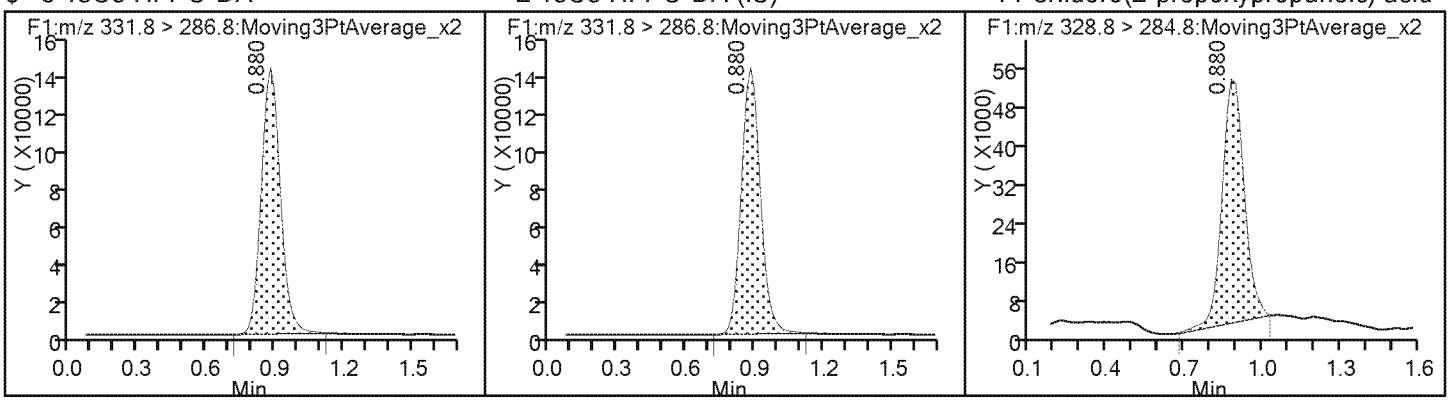
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.880	1.045	-0.165	1.000	787829	10.6	931	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.880	1.045	-0.165		787829	10.0	931	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.880	1.056	-0.176	1.000	289605	3.42	24.9	

Report Date: 26-Feb-2018 13:46:44 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26094.d				
Injection Date:	26-Feb-2018 13:01:21	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-C-2-A	Lab Sample ID:	280-106426-2		
Client ID:	FAY-D-3980NIRAD-W1-1-021418-D				
Operator ID:	JBH	ALS Bottle#:	25	Worklist Smp#:	84
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26094.d				
Lims ID:	280-106426-C-2-A				
Client ID:	FAY-D-3980NIRAD-W1-1-021418-D				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 13:01:21	ALS Bottle#:	25	Worklist Smp#:	84
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-C-2-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 13:46:25	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:11

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	10.6	105.52

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-5533MRSHR-W1-1-021418 | Lab Sample ID: 280-106426-3

Matrix: Water | Lab File ID: hfpo718B26095.d

Analysis Method: 8321A | Date Collected: 02/14/2018 09:14

Extraction Method: 3535 | Date Extracted: 02/24/2018 20:22

Sample wt/vol: 259.8(mL) | Date Analyzed: 02/26/2018 13:04

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.057		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	124		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26095.d
Lims ID: 280-106426-A-3-A
Client ID: FAY-D-5533MRSHR-W1-1-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 13:04:37 ALS Bottle#: 26 Worklist Smp#: 85
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-A-3-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:14

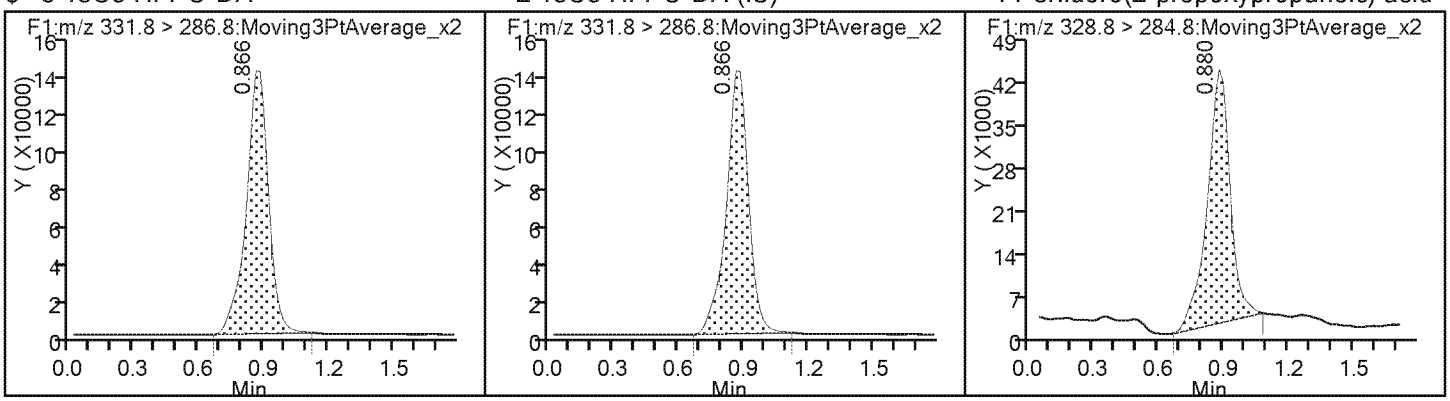
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.866	1.045	-0.179	1.000	925732	12.4	897	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.866	1.045	-0.179		925732	10.0	897	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.880	1.056	-0.176	1.000	292889	2.94	22.0	

Report Date: 26-Feb-2018 13:46:46 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26095.d				
Injection Date:	26-Feb-2018 13:04:37	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-A-3-A	Lab Sample ID:	280-106426-3		
Client ID:	FAY-D-5533MRSHR-W1-1-021418				
Operator ID:	JBH	ALS Bottle#:	26	Worklist Smp#:	85
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26095.d				
Lims ID:	280-106426-A-3-A				
Client ID:	FAY-D-5533MRSHR-W1-1-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 13:04:37	ALS Bottle#:	26	Worklist Smp#:	85
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-A-3-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 13:46:25	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:14

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	12.4	123.99

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-5617MATTH-W1-1-021418 | Lab Sample ID: 280-106426-4

Matrix: Water | Lab File ID: hfpo718B26096.d

Analysis Method: 8321A | Date Collected: 02/14/2018 10:29

Extraction Method: 3535 | Date Extracted: 02/24/2018 20:22

Sample wt/vol: 261.5(mL) | Date Analyzed: 02/26/2018 13:07

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.028		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	108		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26096.d
Lims ID: 280-106426-C-4-A
Client ID: FAY-D-5617MATTH-W1-1-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 13:07:54 ALS Bottle#: 27 Worklist Smp#: 86
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-C-4-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:16

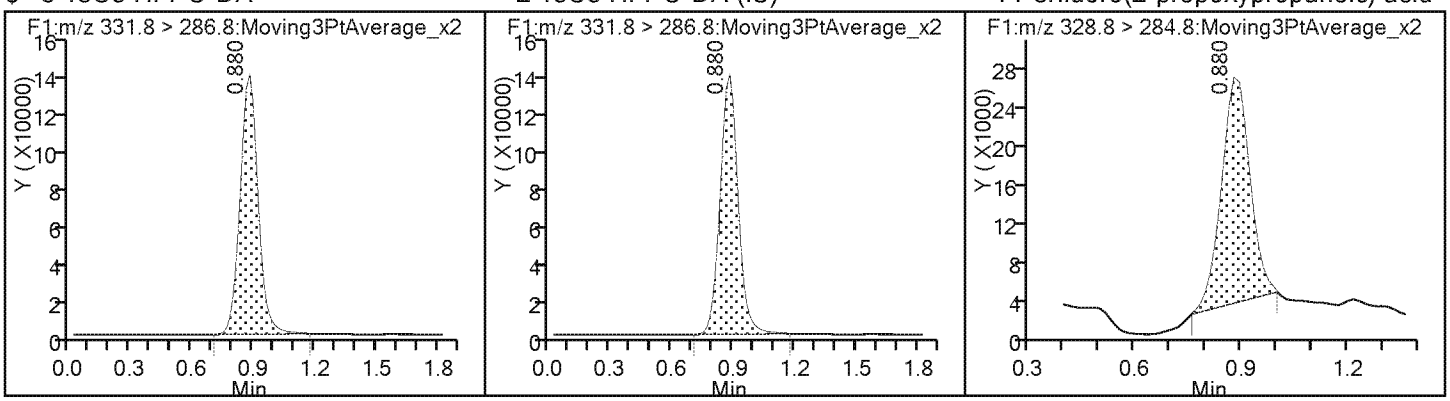
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.880	1.045	-0.165	1.000	808836	10.8	1225	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.880	1.045	-0.165		808836	10.0	1225	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.880	1.056	-0.176	1.000	128437	1.46	11.4	

Report Date: 26-Feb-2018 13:46:48 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26096.d				
Injection Date:	26-Feb-2018 13:07:54	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-C-4-A	Lab Sample ID:	280-106426-4		
Client ID:	FAY-D-5617MATTH-W1-1-021418				
Operator ID:	JBH	ALS Bottle#:	27	Worklist Smp#:	86
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26096.d				
Lims ID:	280-106426-C-4-A				
Client ID:	FAY-D-5617MATTH-W1-1-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 13:07:54	ALS Bottle#:	27	Worklist Smp#:	86
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-C-4-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 13:46:25	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	10.8	108.34

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-6520TABOR-W1-1-021418 Lab Sample ID: 280-106426-5

Matrix: Water Lab File ID: hfpo718B26163.d

Analysis Method: 8321A Date Collected: 02/14/2018 12:48

Extraction Method: 3535 Date Extracted: 02/23/2018 21:44

Sample wt/vol: 265.4(mL) Date Analyzed: 02/26/2018 16:47

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: Synergi Hydro ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 406060 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	<0.010		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	115		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26163.d
Lims ID: 280-106426-A-5-A
Client ID: FAY-D-6520TABOR-W1-1-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 16:47:24 ALS Bottle#: 1 Worklist Smp#: 152
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-A-5-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:49:51 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:47:55

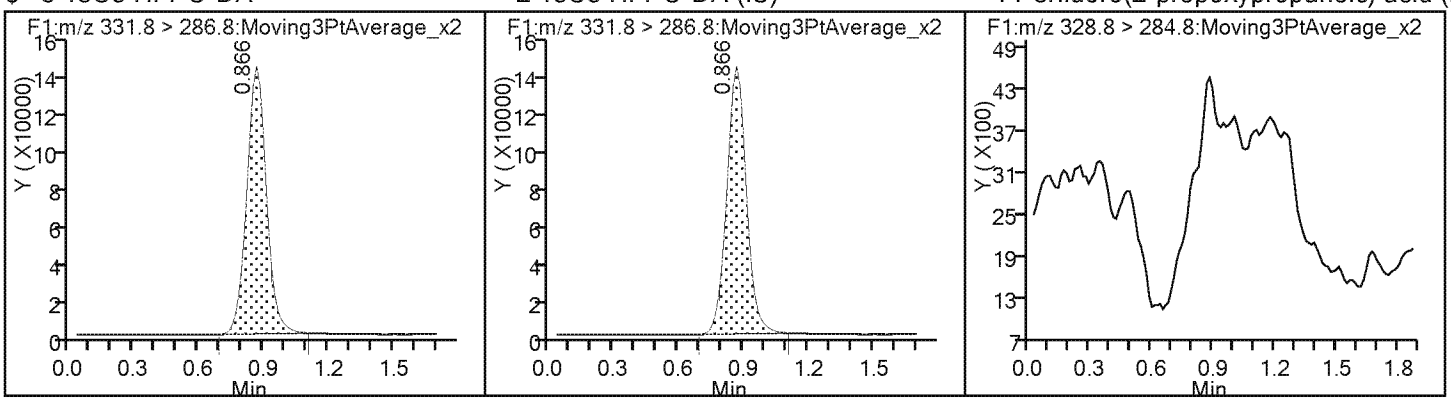
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.866	1.045	-0.179	1.000	858275	11.5	986	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.866	1.045	-0.179		858275	10.0	986	

Report Date: 27-Feb-2018 07:50:00 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26163.d				
Injection Date:	26-Feb-2018 16:47:24	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-A-5-A	Lab Sample ID:	280-106426-5		
Client ID:	FAY-D-6520TABOR-W1-1-021418				
Operator ID:	JBH	ALS Bottle#:	1	Worklist Smp#:	152
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid (ND)



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26163.d				
Lims ID:	280-106426-A-5-A				
Client ID:	FAY-D-6520TABOR-W1-1-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 16:47:24	ALS Bottle#:	1	Worklist Smp#:	152
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-A-5-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	27-Feb-2018 07:49:51	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK019				

First Level Reviewer: meyera Date: 27-Feb-2018 07:47:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	11.5	114.96

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-6719TABOR-W1-1-021418 Lab Sample ID: 280-106426-6

Matrix: Water Lab File ID: hfpo718B26165.d

Analysis Method: 8321A Date Collected: 02/14/2018 15:42

Extraction Method: 3535 Date Extracted: 02/23/2018 21:44

Sample wt/vol: 264(mL) Date Analyzed: 02/26/2018 16:53

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: Synergi Hydro ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 406060 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.024		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	108		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26165.d
Lims ID: 280-106426-C-6-A
Client ID: FAY-D-6719TABOR-W1-1-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 16:53:52 ALS Bottle#: 2 Worklist Smp#: 154
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-C-6-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:50:01 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:48:03

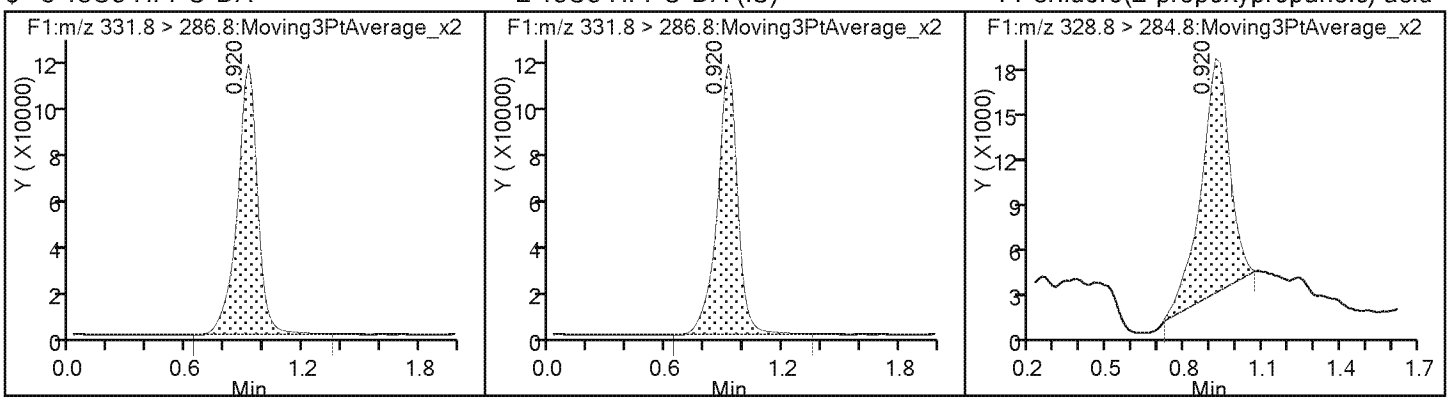
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.920	1.045	-0.125	1.000	805765	10.8	1300	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.920	1.045	-0.125		805765	10.0	1300	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.920	1.056	-0.136	1.000	111390	1.27	6.9	

Report Date: 27-Feb-2018 07:50:02 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26165.d				
Injection Date:	26-Feb-2018 16:53:52	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-C-6-A	Lab Sample ID:	280-106426-6		
Client ID:	FAY-D-6719TABOR-W1-1-021418				
Operator ID:	JBH	ALS Bottle#:	2	Worklist Smp#:	154
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26165.d				
Lims ID:	280-106426-C-6-A				
Client ID:	FAY-D-6719TABOR-W1-1-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 16:53:52	ALS Bottle#:	2	Worklist Smp#:	154
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-C-6-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	27-Feb-2018 07:50:01	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK019				

First Level Reviewer: meyera Date: 27-Feb-2018 07:48:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	10.8	107.92

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-FB-021418 | Lab Sample ID: 280-106426-7

Matrix: Water | Lab File ID: hfpo718B26166.d

Analysis Method: 8321A | Date Collected: 02/14/2018 07:15

Extraction Method: 3535 | Date Extracted: 02/23/2018 21:44

Sample wt/vol: 257.9(mL) | Date Analyzed: 02/26/2018 16:57

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406060 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	<0.010		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	119		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26166.d
Lims ID: 280-106426-D-7-A
Client ID: FAY-D-FB-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 16:57:05 ALS Bottle#: 3 Worklist Smp#: 155
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-D-7-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:50:01 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:48:08

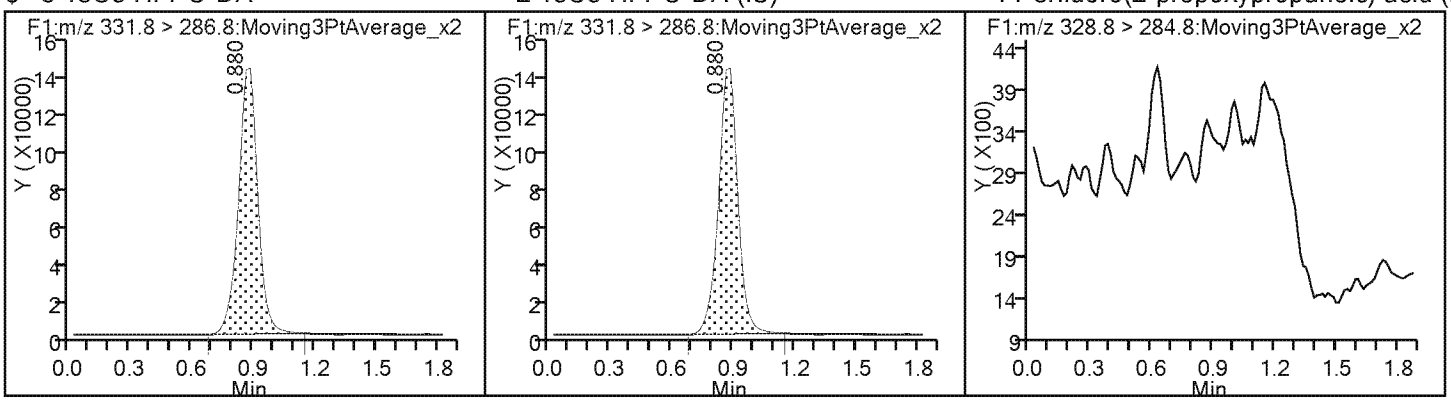
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.880	1.045	-0.165	1.000	887963	11.9	1250	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.880	1.045	-0.165		887963	10.0	1250	

Report Date: 27-Feb-2018 07:50:03 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26166.d				
Injection Date:	26-Feb-2018 16:57:05	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-D-7-A	Lab Sample ID:	280-106426-7		
Client ID:	FAY-D-FB-021418				
Operator ID:	JBH	ALS Bottle#:	3	Worklist Smp#:	155
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid (ND)



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26166.d				
Lims ID:	280-106426-D-7-A				
Client ID:	FAY-D-FB-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 16:57:05	ALS Bottle#:	3	Worklist Smp#:	155
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-D-7-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	27-Feb-2018 07:50:01	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK019				

First Level Reviewer: meyera Date: 27-Feb-2018 07:48:08

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	11.9	118.93

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-5500RNGTL-W1-1-021418 | Lab Sample ID: 280-106426-8

Matrix: Water | Lab File ID: hfpo718B26167.d

Analysis Method: 8321A | Date Collected: 02/14/2018 16:05

Extraction Method: 3535 | Date Extracted: 02/23/2018 21:44

Sample wt/vol: 269.6(mL) | Date Analyzed: 02/26/2018 17:00

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406060 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.11		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	99		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26167.d
Lims ID: 280-106426-A-8-A
Client ID: FAY-D-5500RNGTL-W1-1-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 17:00:19 ALS Bottle#: 4 Worklist Smp#: 156
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-A-8-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:50:01 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:48:12

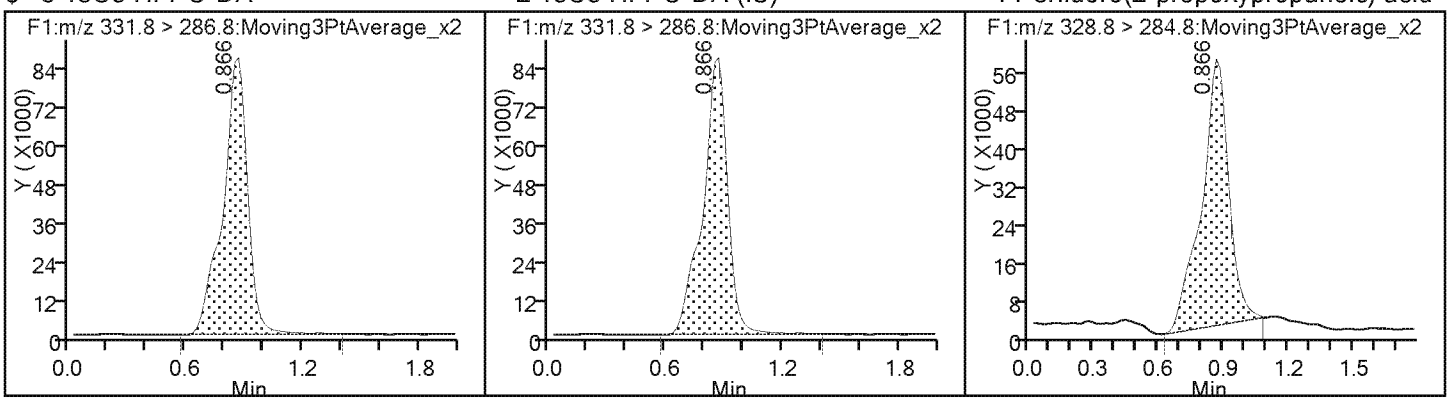
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.866	1.045	-0.179	1.000	738019	9.89	1050	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.866	1.045	-0.179		738019	10.0	1050	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.866	1.056	-0.190	1.000	473771	6.00	30.5	

Report Date: 27-Feb-2018 07:50:04 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26167.d				
Injection Date:	26-Feb-2018 17:00:19	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-A-8-A	Lab Sample ID:	280-106426-8		
Client ID:	FAY-D-5500RNGTL-W1-1-021418				
Operator ID:	JBH	ALS Bottle#:	4	Worklist Smp#:	156
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26167.d				
Lims ID:	280-106426-A-8-A				
Client ID:	FAY-D-5500RNGTL-W1-1-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 17:00:19	ALS Bottle#:	4	Worklist Smp#:	156
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-A-8-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	27-Feb-2018 07:50:01	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK019				

First Level Reviewer: meyera Date: 27-Feb-2018 07:48:12

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	9.89	98.85

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-71LAURA-W1-1-021418 | Lab Sample ID: 280-106426-9

Matrix: Water | Lab File ID: hfpo718B26168.d

Analysis Method: 8321A | Date Collected: 02/14/2018 13:58

Extraction Method: 3535 | Date Extracted: 02/23/2018 21:44

Sample wt/vol: 277.6(mL) | Date Analyzed: 02/26/2018 17:03

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406060 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.052		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	103		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26168.d
Lims ID: 280-106426-B-9-A
Client ID: FAY-D-71LAURA-W1-1-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 17:03:33 ALS Bottle#: 5 Worklist Smp#: 157
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-B-9-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:50:01 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:48:24

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.880	1.045	-0.165	1.000	769760	10.3	880	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.880	1.045	-0.165		769760	10.0	880	
1 Perfluoro(2-propoxypropanoic) acid								M
328.8 > 284.8	0.880	1.056	-0.176	1.000	239117	2.89	16.2	M

QC Flag Legend

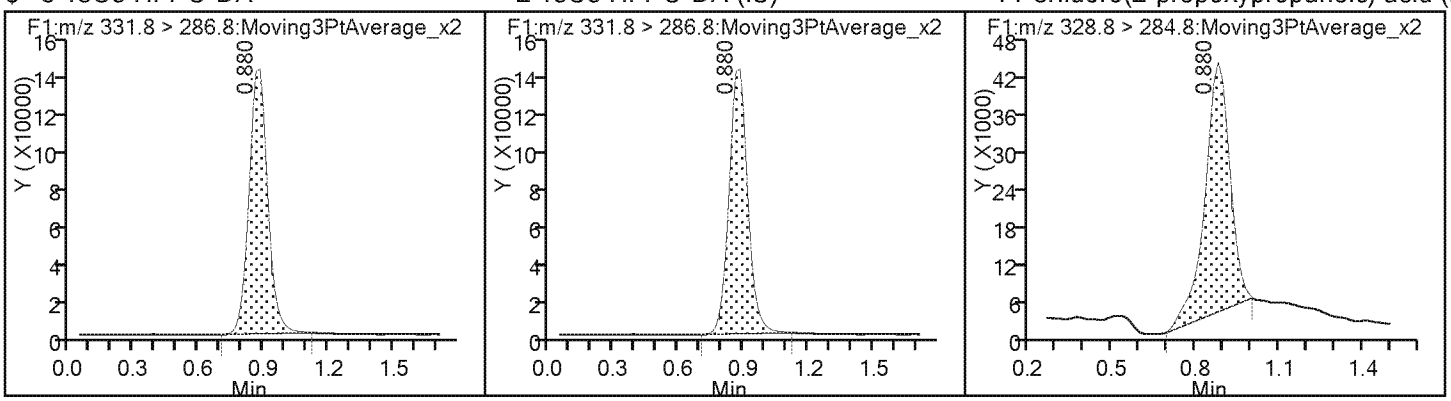
Review Flags
M - Manually Integrated

Report Date: 27-Feb-2018 07:50:05 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26168.d				
Injection Date:	26-Feb-2018 17:03:33	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-B-9-A	Lab Sample ID:	280-106426-9		
Client ID:	FAY-D-71LAURA-W1-1-021418				
Operator ID:	JBH	ALS Bottle#:	5	Worklist Smp#:	157
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid (M)



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26168.d				
Lims ID:	280-106426-B-9-A				
Client ID:	FAY-D-71LAURA-W1-1-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 17:03:33	ALS Bottle#:	5	Worklist Smp#:	157
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-B-9-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	27-Feb-2018 07:50:01	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK019				

First Level Reviewer: meyera Date: 27-Feb-2018 07:48:24

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	10.3	103.10

Manual Integration/User Assign Peak Report

TestAmerica Denver

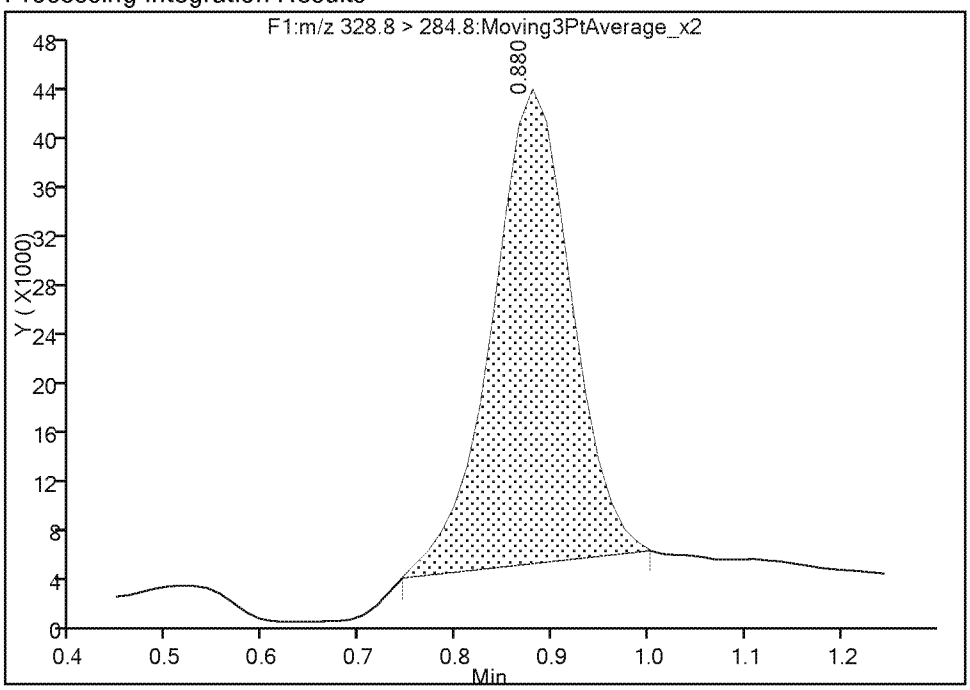
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26168.d				
Injection Date:	26-Feb-2018 17:03:33	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-B-9-A	Lab Sample ID:	280-106426-9		
Client ID:	FAY-D-71LAURA-W1-1-021418				
Operator ID:	JBH	ALS Bottle#:	5	Worklist Smp#:	157
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		
Column:		Detector	F1:MRM		

1 Perfluoro(2-propoxypropanoic) acid, CAS: 13252-13-6

Signal: 1

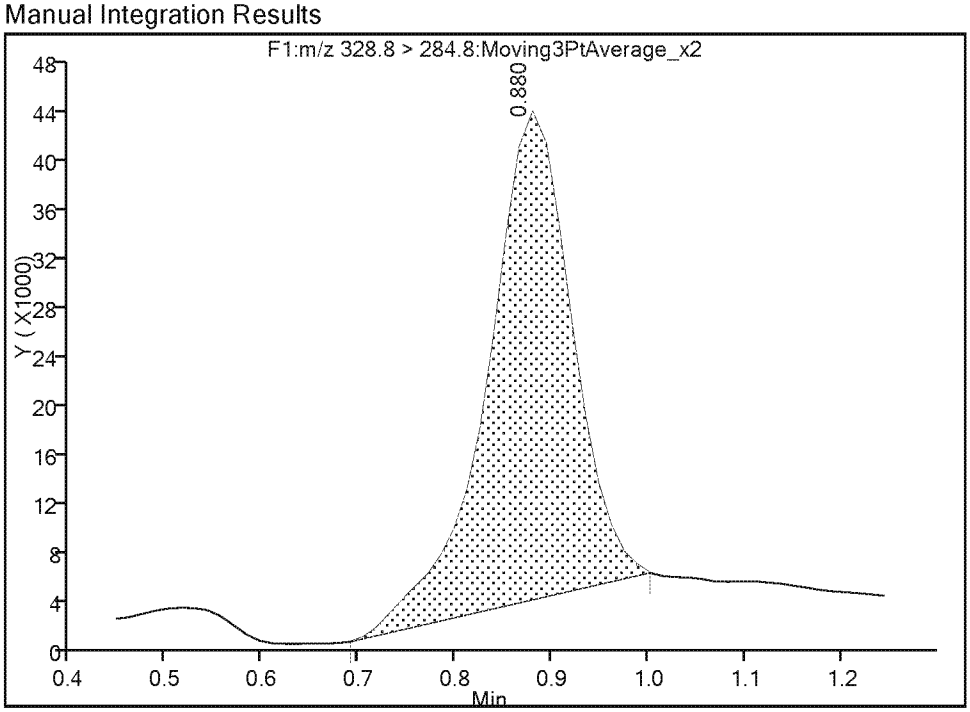
Processing Integration Results

RT: 0.88
Area: 217840
Amount: 2.626287
Amount Units: ug/l



Manual Integration Results

RT: 0.88
Area: 239117
Amount: 2.886121
Amount Units: ug/l



Reviewer: meyera, 27-Feb-2018 07:48:22

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-3995NIRAD-W1-1-021418 | Lab Sample ID: 280-106426-10

Matrix: Water | Lab File ID: hfpo718B26169.d

Analysis Method: 8321A | Date Collected: 02/14/2018 16:46

Extraction Method: 3535 | Date Extracted: 02/23/2018 21:44

Sample wt/vol: 261.4(mL) | Date Analyzed: 02/26/2018 17:06

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406060 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.61		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	94		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26169.d
Lims ID: 280-106426-C-10-A
Client ID: FAY-D-3995NIRAD-W1-1-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 17:06:47 ALS Bottle#: 6 Worklist Smp#: 158
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-C-10-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:50:01 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:48:28

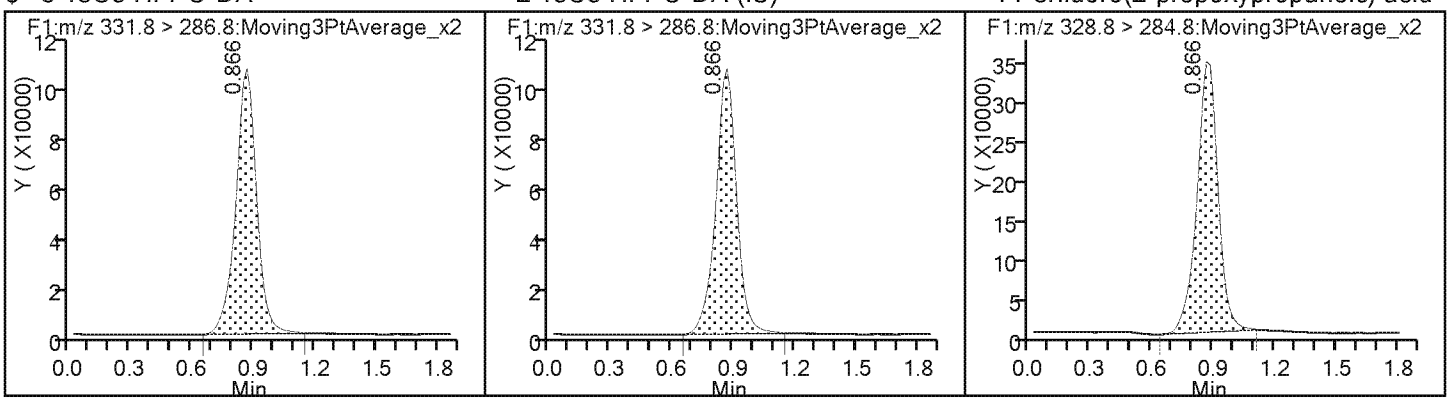
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.866	1.045	-0.179	1.000	700163	9.38	765	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.866	1.045	-0.179		700163	10.0	765	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.866	1.056	-0.190	1.000	2374726	31.8	137	

Report Date: 27-Feb-2018 07:50:06 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26169.d				
Injection Date:	26-Feb-2018 17:06:47	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-C-10-A	Lab Sample ID:	280-106426-10		
Client ID:	FAY-D-3995NIRAD-W1-1-021418				
Operator ID:	JBH	ALS Bottle#:	6	Worklist Smp#:	158
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26169.d				
Lims ID:	280-106426-C-10-A				
Client ID:	FAY-D-3995NIRAD-W1-1-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 17:06:47	ALS Bottle#:	6	Worklist Smp#:	158
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-C-10-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	27-Feb-2018 07:50:01	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK019				

First Level Reviewer: meyera Date: 27-Feb-2018 07:48:28

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	9.38	93.78

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-3995NIRAD-W1-2-021418 Lab Sample ID: 280-106426-11

Matrix: Water Lab File ID: hfpo718B26098.d

Analysis Method: 8321A Date Collected: 02/14/2018 16:47

Extraction Method: 3535 Date Extracted: 02/24/2018 20:22

Sample wt/vol: 266.3(mL) Date Analyzed: 02/26/2018 13:14

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: Synergi Hydro ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.53		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	98		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26098.d
Lims ID: 280-106426-D-11-A
Client ID: FAY-D-3995NIRAD-W1-2-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 13:14:23 ALS Bottle#: 28 Worklist Smp#: 88
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-D-11-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 14:42:50 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 14:40:55

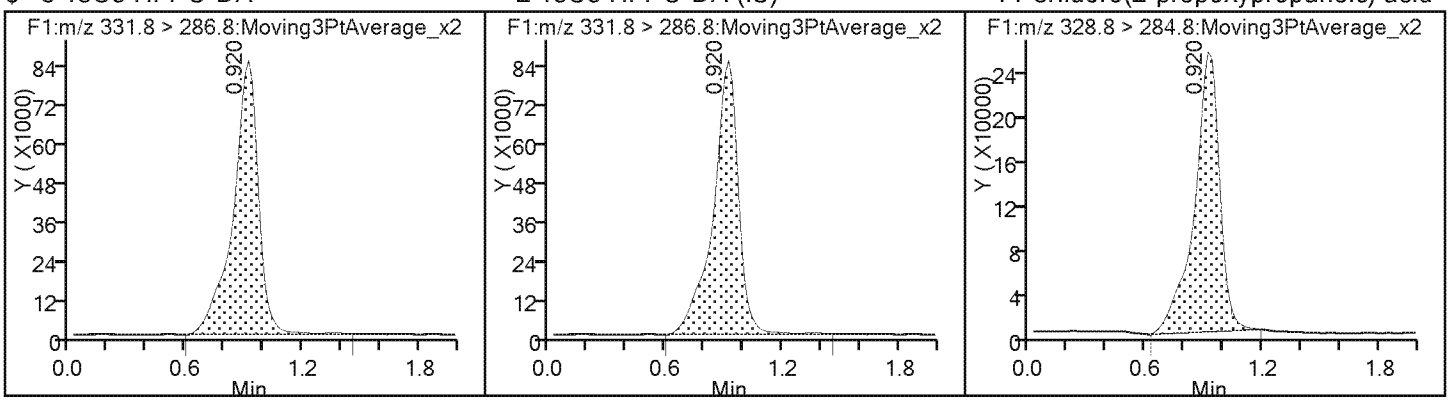
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.920	1.045	-0.125	1.000	732857	9.82	1160	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.920	1.045	-0.125		732857	10.0	1160	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.920	1.056	-0.136	1.000	2213806	28.4	136	

Report Date: 26-Feb-2018 14:43:16 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26098.d				
Injection Date:	26-Feb-2018 13:14:23	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-D-11-A	Lab Sample ID:	280-106426-11		
Client ID:	FAY-D-3995NIRAD-W1-2-021418				
Operator ID:	JBH	ALS Bottle#:	28	Worklist Smp#:	88
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26098.d				
Lims ID:	280-106426-D-11-A				
Client ID:	FAY-D-3995NIRAD-W1-2-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 13:14:23	ALS Bottle#:	28	Worklist Smp#:	88
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-D-11-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 14:42:50	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 14:40:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	9.82	98.16

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-5375MRSHR-W1-1-021418 Lab Sample ID: 280-106426-12

Matrix: Water Lab File ID: hfpo718B26099.d

Analysis Method: 8321A Date Collected: 02/14/2018 09:55

Extraction Method: 3535 Date Extracted: 02/24/2018 20:22

Sample wt/vol: 250(mL) Date Analyzed: 02/26/2018 13:17

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: Synergi Hydro ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.087		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	83		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26099.d
Lims ID: 280-106426-D-12-A
Client ID: FAY-D-5375MRSHR-W1-1-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 13:17:40 ALS Bottle#: 29 Worklist Smp#: 89
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-D-12-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 14:42:50 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 14:40:58

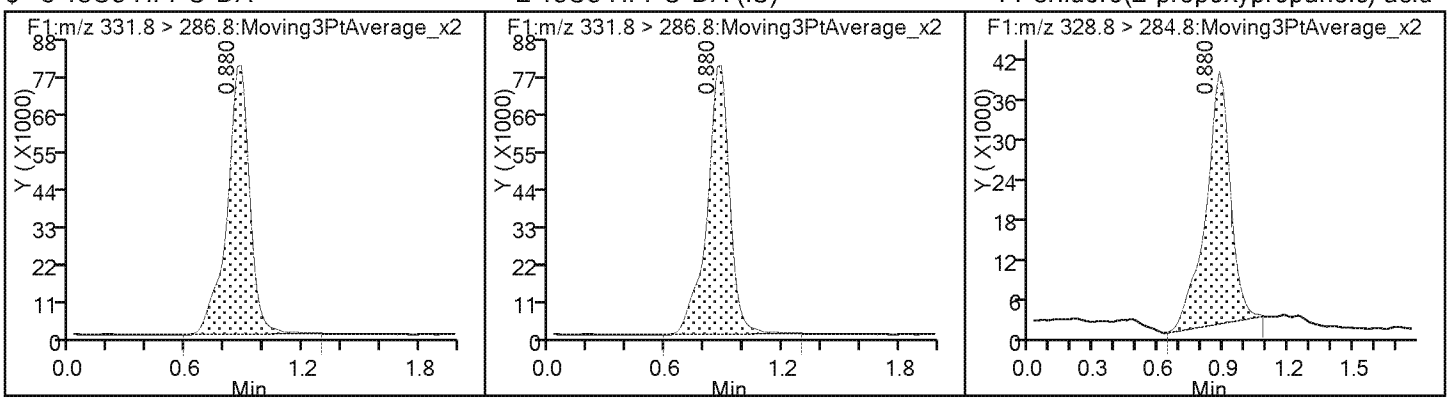
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.880	1.045	-0.165	1.000	622383	8.34	812	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.880	1.045	-0.165		622383	10.0	812	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.880	1.056	-0.176	1.000	289054	4.33	27.7	

Report Date: 26-Feb-2018 14:43:16 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26099.d				
Injection Date:	26-Feb-2018 13:17:40	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-D-12-A	Lab Sample ID:	280-106426-12		
Client ID:	FAY-D-5375MRSHR-W1-1-021418				
Operator ID:	JBH	ALS Bottle#:	29	Worklist Smp#:	89
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26099.d				
Lims ID:	280-106426-D-12-A				
Client ID:	FAY-D-5375MRSHR-W1-1-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 13:17:40	ALS Bottle#:	29	Worklist Smp#:	89
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-D-12-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 14:42:50	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 14:40:58

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	8.34	83.36

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-4013NIRAD-W1-1-021418 | Lab Sample ID: 280-106426-13

Matrix: Water | Lab File ID: hfpo718B26100.d

Analysis Method: 8321A | Date Collected: 02/14/2018 16:58

Extraction Method: 3535 | Date Extracted: 02/24/2018 20:22

Sample wt/vol: 249.5(mL) | Date Analyzed: 02/26/2018 13:20

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.074		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	98		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26100.d
Lims ID: 280-106426-D-13-A
Client ID: FAY-D-4013NIRAD-W1-1-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 13:20:56 ALS Bottle#: 30 Worklist Smp#: 90
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-D-13-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 14:42:50 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 14:41:01

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.866	1.045	-0.179	1.000	731757	9.80	1116	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.866	1.045	-0.179		731757	10.0	1116	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.880	1.056	-0.176	1.000	290409	3.70	21.3	

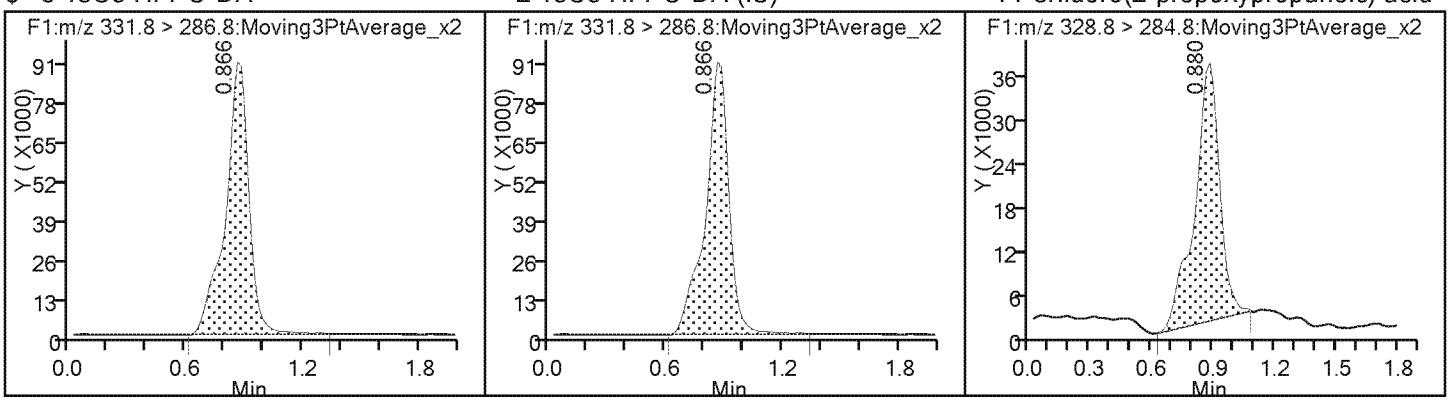
Report Date: 26-Feb-2018 14:43:17 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26100.d

Injection Date:	26-Feb-2018 13:20:56	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-D-13-A	Lab Sample ID:	280-106426-13		
Client ID:	FAY-D-4013NIRAD-W1-1-021418				
Operator ID:	JBH	ALS Bottle#:	30	Worklist Smp#:	90
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26100.d
Lims ID: 280-106426-D-13-A
Client ID: FAY-D-4013NIRAD-W1-1-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 13:20:56 ALS Bottle#: 30 Worklist Smp#: 90
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-D-13-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 14:42:50 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 14:41:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	9.80	98.01

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-4013NIRAD-W1-2-021418 | Lab Sample ID: 280-106426-14

Matrix: Water | Lab File ID: hfpo718B26101.d

Analysis Method: 8321A | Date Collected: 02/14/2018 17:16

Extraction Method: 3535 | Date Extracted: 02/24/2018 20:22

Sample wt/vol: 267.2(mL) | Date Analyzed: 02/26/2018 13:24

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	<0.010		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	104		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26101.d
Lims ID: 280-106426-C-14-A
Client ID: FAY-D-4013NIRAD-W1-2-021418
Sample Type: Client
Inject. Date: 26-Feb-2018 13:24:12 ALS Bottle#: 31 Worklist Smp#: 91
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-C-14-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 14:42:50 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 14:41:03

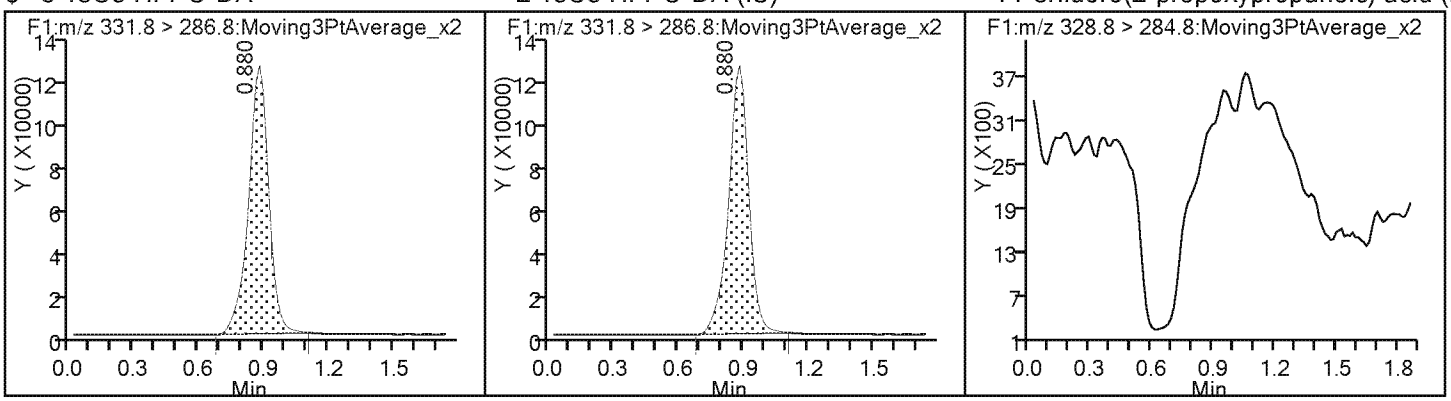
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.880	1.045	-0.165	1.000	775305	10.4	885	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.880	1.045	-0.165		775305	10.0	885	

Report Date: 26-Feb-2018 14:43:18 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26101.d				
Injection Date:	26-Feb-2018 13:24:12	Instrument ID:	LC_LCMS7		
Lims ID:	280-106426-C-14-A	Lab Sample ID:	280-106426-14		
Client ID:	FAY-D-4013NIRAD-W1-2-021418				
Operator ID:	JBH	ALS Bottle#:	31	Worklist Smp#:	91
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid (ND)



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26101.d				
Lims ID:	280-106426-C-14-A				
Client ID:	FAY-D-4013NIRAD-W1-2-021418				
Sample Type:	Client				
Inject. Date:	26-Feb-2018 13:24:12	ALS Bottle#:	31	Worklist Smp#:	91
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-C-14-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 14:42:50	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 14:41:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	10.4	103.84

FORM VI
LCMS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-106426-1 Analy Batch No.: 404345

SDG No.:

Instrument ID: LC_LCMS7 GC Column: Synergi Hyd ID: Heated Purge: (Y/N) N

Calibration Start Date: 02/08/2018 13:05 Calibration End Date: 02/08/2018 13:31 Calibration ID: 31612

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD001 280-404345/3	hfpo718B08034.d
Level 2	STD002 280-404345/4	hfpo718B08035.d
Level 3	STD003 280-404345/5	hfpo718B08036.d
Level 4	STD004 280-404345/6	hfpo718B08037.d
Level 5	STD005 280-404345/7	hfpo718B08038.d
Level 6	STD006 280-404345/8	hfpo718B08039.d
Level 7	STD007 280-404345/9	hfpo718B08040.d
Level 8	STD008 280-404345/10	hfpo718B08041.d
Level 9	STD009 280-404345/11	hfpo718B08042.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
HFPO-DA	1.056	1.056	1.056	1.056	1.056	1.056	1.056	1.056	1.056		0.556 - 1.556	1.056
13C3 HFPO-DA	1.042	1.042	1.042	1.042	1.042	1.042	1.042	1.056	1.056		0.545 - 1.545	1.045

FORM VI
LCMS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-106426-1 Analy Batch No.: 404345

SDG No.:

Instrument ID: LC_LCMS7 GC Column: Synergi Hyd ID: Heated Purge: (Y/N) N

Calibration Start Date: 02/08/2018 13:05 Calibration End Date: 02/08/2018 13:31 Calibration ID: 31612

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD001 280-404345/3	hfpo718B08034.d
Level 2	STD002 280-404345/4	hfpo718B08035.d
Level 3	STD003 280-404345/5	hfpo718B08036.d
Level 4	STD004 280-404345/6	hfpo718B08037.d
Level 5	STD005 280-404345/7	hfpo718B08038.d
Level 6	STD006 280-404345/8	hfpo718B08039.d
Level 7	STD007 280-404345/9	hfpo718B08040.d
Level 8	STD008 280-404345/10	hfpo718B08041.d
Level 9	STD009 280-404345/11	hfpo718B08042.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
13C3 HFPO-DA	75771 75244 71284	75964 75940	72010 75039	77000 73687	Ave		74659.8778				2.6		30.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-106426-1 Analy Batch No.: 404345

SDG No.:

Instrument ID: LC_LCMS7 GC Column: Synergi Hyd ID: Heated Purge: (Y/N) N

Calibration Start Date: 02/08/2018 13:05 Calibration End Date: 02/08/2018 13:31 Calibration ID: 31612

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
HFPO-DA	1.1630 1.1128	1.1250 1.0911	1.0756 1.0665	1.0527 1.0507	1.1211	Lin1	0.0361	1.0638							1.0000		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-106426-1 Analy Batch No.: 404345

SDG No.:

Instrument ID: LC_LCMS7 GC Column: Synergi Hyd ID: Heated Purge: (Y/N) N

Calibration Start Date: 02/08/2018 13:05 Calibration End Date: 02/08/2018 13:31 Calibration ID: 31612

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD001 280-404345/3	hfpo718B08034.d
Level 2	STD002 280-404345/4	hfpo718B08035.d
Level 3	STD003 280-404345/5	hfpo718B08036.d
Level 4	STD004 280-404345/6	hfpo718B08037.d
Level 5	STD005 280-404345/7	hfpo718B08038.d
Level 6	STD006 280-404345/8	hfpo718B08039.d
Level 7	STD007 280-404345/9	hfpo718B08040.d
Level 8	STD008 280-404345/10	hfpo718B08041.d
Level 9	STD009 280-404345/11	hfpo718B08042.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
13C3 HFPO-DA	Ave	757714 759397	759642 750388	720099 736869	769995 712841	752444	10.0 10.0	10.0 10.0	10.0 10.0	10.0 10.0	10.0

Curve Type Legend:

Ave = Average

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-106426-1 Analy Batch No.: 404345

SDG No.:

Instrument ID: LC_LCMS7 GC Column: Synergi Hyd ID: Heated Purge: (Y/N) N

Calibration Start Date: 02/08/2018 13:05 Calibration End Date: 02/08/2018 13:31 Calibration ID: 31612

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD001 280-404345/3	hfpo718B08034.d
Level 2	STD002 280-404345/4	hfpo718B08035.d
Level 3	STD003 280-404345/5	hfpo718B08036.d
Level 4	STD004 280-404345/6	hfpo718B08037.d
Level 5	STD005 280-404345/7	hfpo718B08038.d
Level 6	STD006 280-404345/8	hfpo718B08039.d
Level 7	STD007 280-404345/9	hfpo718B08040.d
Level 8	STD008 280-404345/10	hfpo718B08041.d
Level 9	STD009 280-404345/11	hfpo718B08042.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
HFPO-DA	13CP ODA	Lin1	22031 845082	42730 2046873	77455 3929397	162117 7489478	421775	0.250 10.0	0.500 25.0	1.00 50.0	2.00 100	5.00

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08034.d
Lims ID: std001
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 08-Feb-2018 13:05:38 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: L1
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:13 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:19:04

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.042	1.045	-0.003		757714	10.0	1562	
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.042	1.045	-0.003	1.000	757714	10.1	1562	
1 Perfluoro(2-propoxypropanoic) acid								M
328.8 > 284.8	1.056	1.056	0.0	1.000	22031	0.2394	4.4	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

HFPO_CAL-1_00032 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:13 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08034.d

Injection Date: 08-Feb-2018 13:05:38 Instrument ID: LC_LCMS7

Lims ID: std001

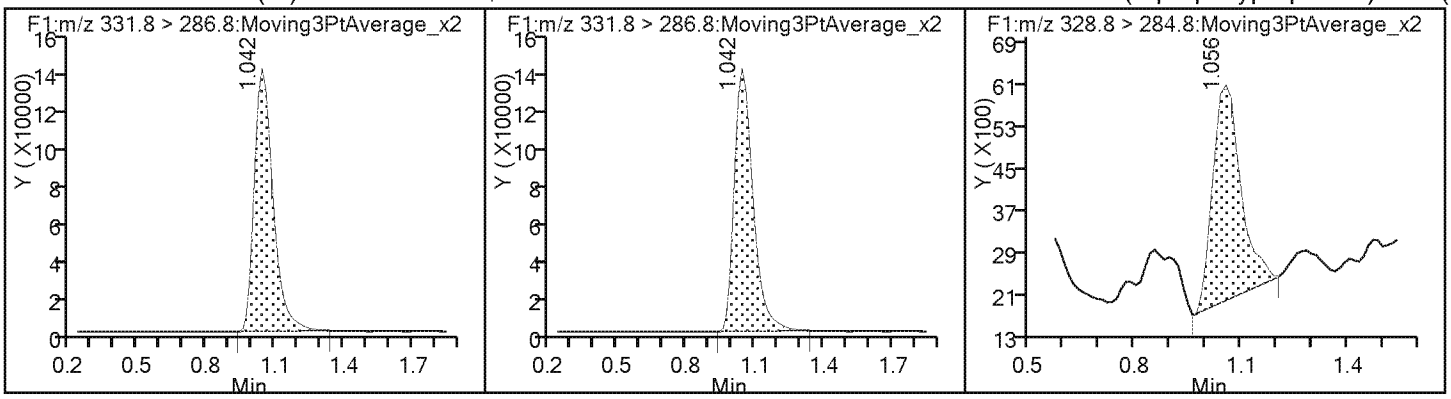
Client ID:

Operator ID: JBH ALS Bottle#: 2 Worklist Smp#: 3

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

* 2 13C3 HFPO-DA (IS) $ 3 13C3 HFPO-DA 1 Perfluoro(2-propoxypropanoic) acid (M)



Manual Integration/User Assign Peak Report

TestAmerica Denver

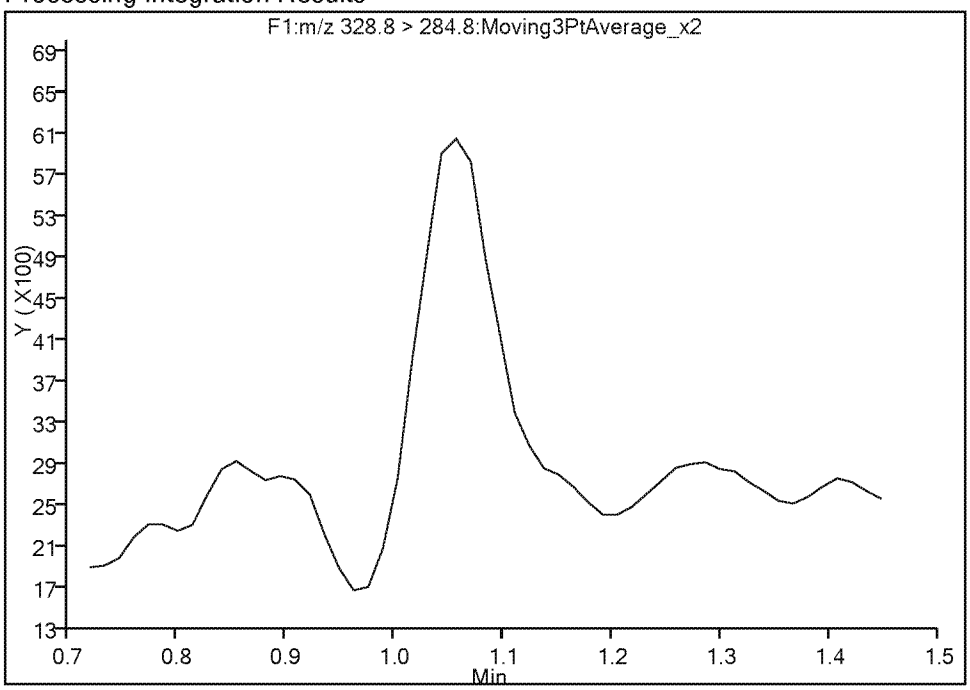
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08034.d				
Injection Date:	08-Feb-2018 13:05:38	Instrument ID:	LC_LCMS7		
Lims ID:	std001				
Client ID:					
Operator ID:	JBH	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		
Column:		Detector	F1:MRM		

1 Perfluoro(2-propoxypropanoic) acid, CAS: 13252-13-6

Signal: 1

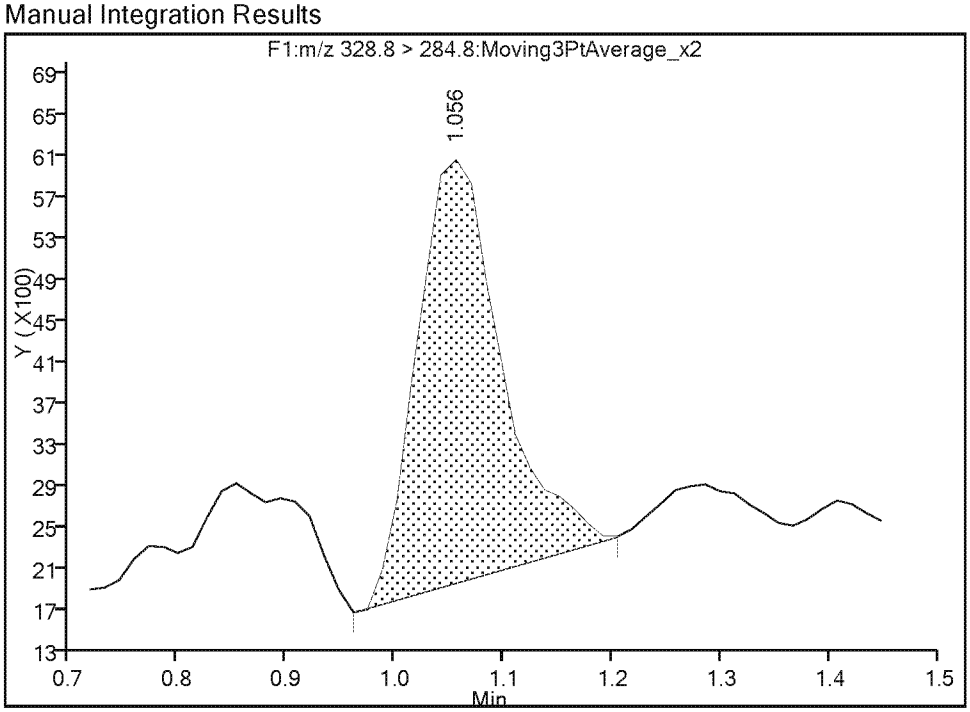
Processing Integration Results

Not Detected
Expected RT: 1.06



Manual Integration Results

RT: 1.06
Area: 22031
Amount: 0.239356
Amount Units: ug/l



Reviewer: meyera, 08-Feb-2018 15:19:01
Audit Action: Manually Integrated Audit Reason: Assign Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08035.d
Lims ID: std002
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Feb-2018 13:08:52 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: L2
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:14 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:19:16

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.042	1.045	-0.003	1.000	759642	10.2	1267	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.042	1.045	-0.003		759642	10.0	1267	
1 Perfluoro(2-propoxypropanoic) acid								M
328.8 > 284.8	1.056	1.056	0.0	1.000	42730	0.4948	6.5	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

HFPO_CAL-2_00033 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:14 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08035.d

Injection Date: 08-Feb-2018 13:08:52 Instrument ID: LC_LCMS7

Lims ID: std002

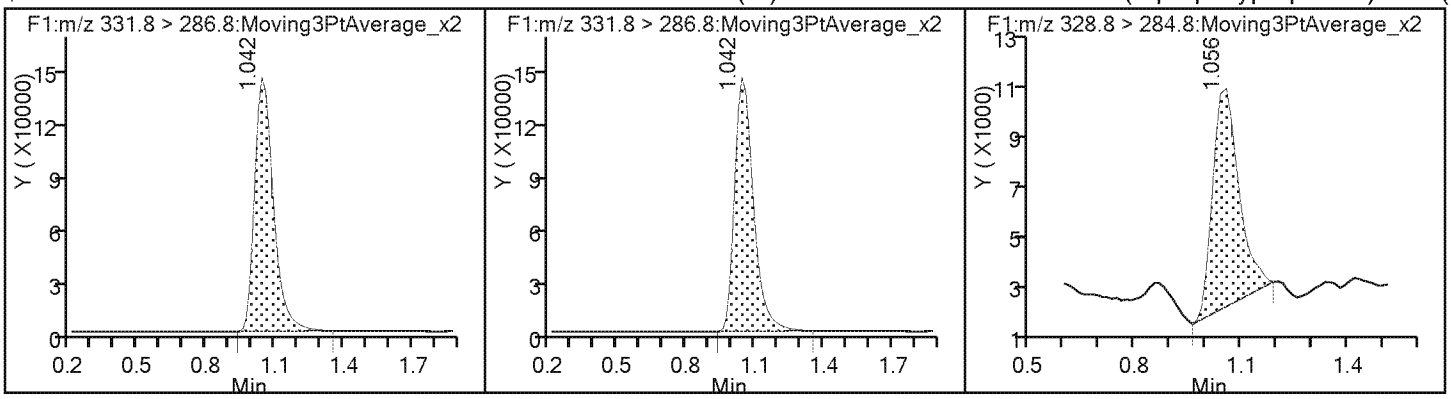
Client ID:

Operator ID: JBH ALS Bottle#: 3 Worklist Smp#: 4

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid (M)



Manual Integration/User Assign Peak Report

TestAmerica Denver

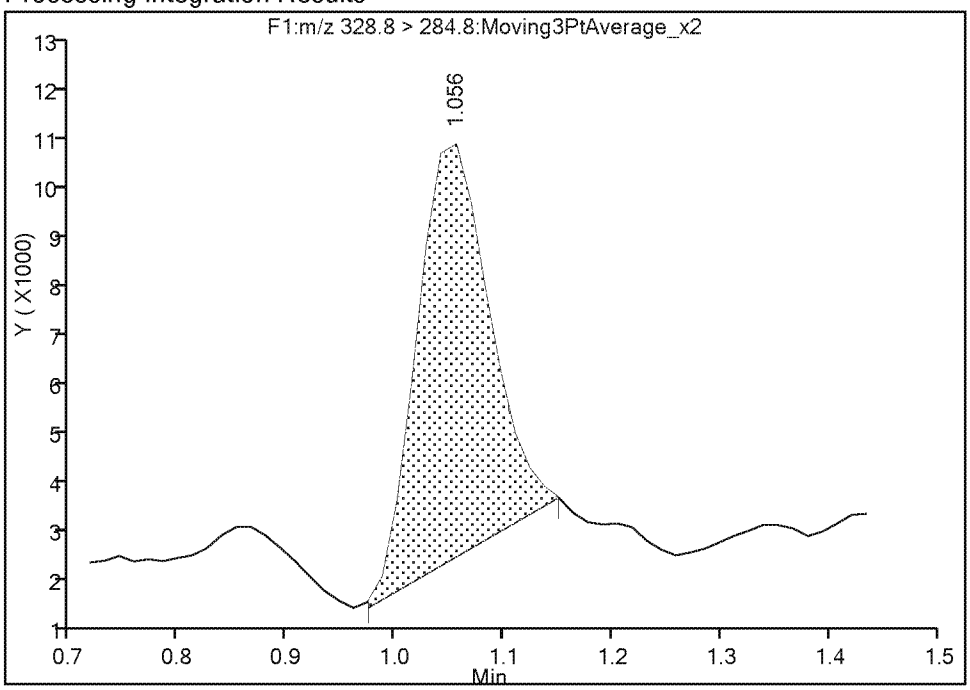
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08035.d				
Injection Date:	08-Feb-2018 13:08:52	Instrument ID:	LC_LCMS7		
Lims ID:	std002				
Client ID:					
Operator ID:	JBH	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		
Column:		Detector	F1:MRM		

1 Perfluoro(2-propoxypropanoic) acid, CAS: 13252-13-6

Signal: 1

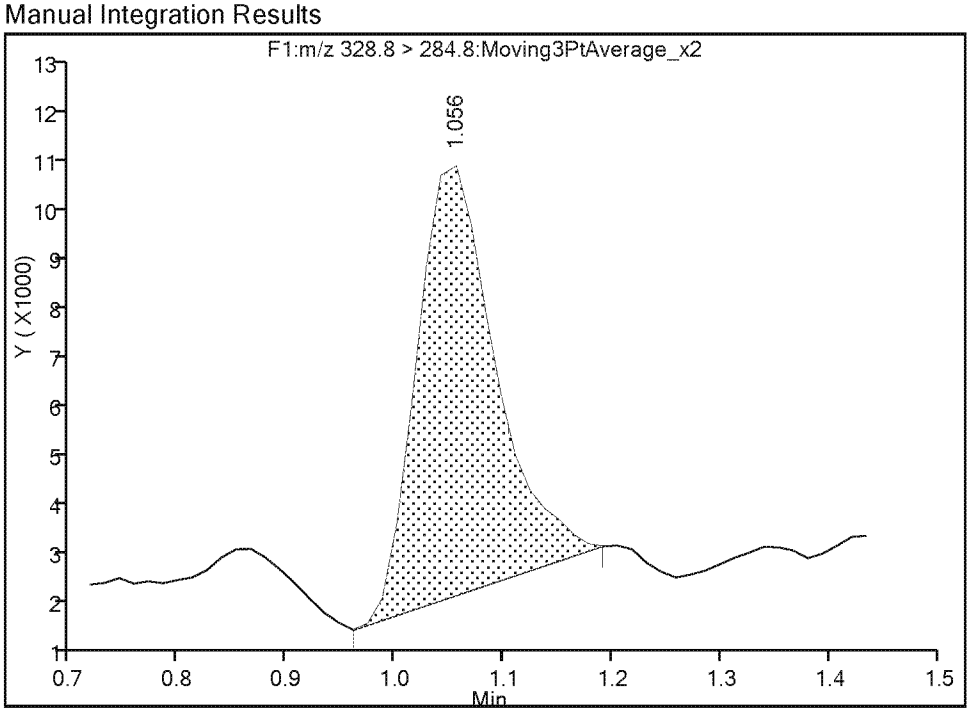
Processing Integration Results

RT: 1.06
Area: 38092
Amount: 0.452274
Amount Units: ug/l



Manual Integration Results

RT: 1.06
Area: 42730
Amount: 0.494804
Amount Units: ug/l



Reviewer: meyera, 08-Feb-2018 15:19:12

Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08036.d
Lims ID: std003
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Feb-2018 13:12:06 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: L3
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:14 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:19:19

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.042	1.045	-0.003		720099	10.0	956	
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.042	1.045	-0.003	1.000	720099	9.65	956	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	1.056	1.056	0.0	1.000	77455	0.9771	10.6	

Reagents:

HFPO_CAL-3_00032 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:15 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08036.d

Injection Date: 08-Feb-2018 13:12:06 Instrument ID: LC_LCMS7

Lims ID: std003

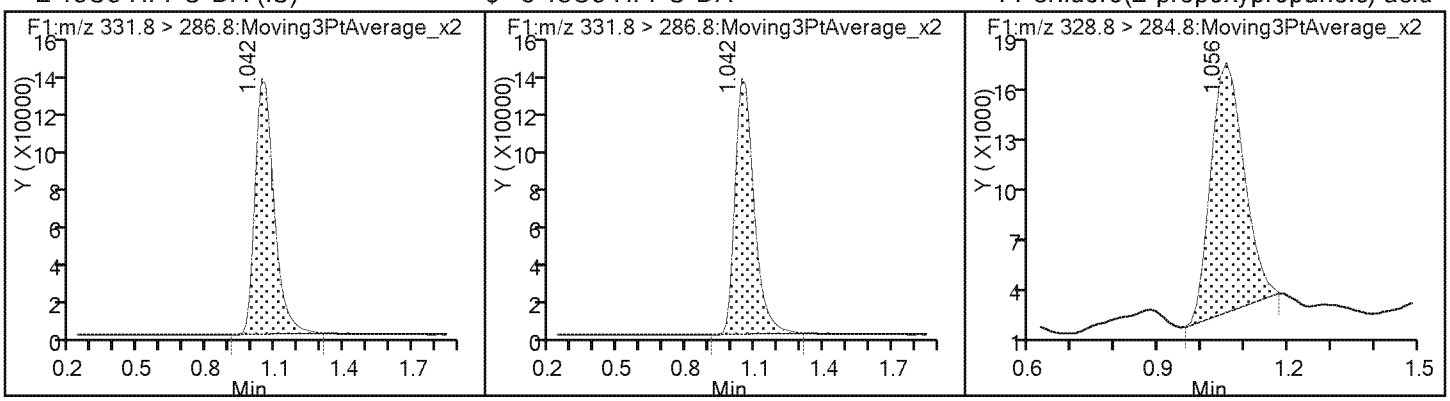
Client ID:

Operator ID: JBH ALS Bottle#: 4 Worklist Smp#: 5

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

* 2 13C3 HFPO-DA (IS) $ 3 13C3 HFPO-DA 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08037.d
Lims ID: std004
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Feb-2018 13:15:21 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: L4
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:15 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:19:22

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.042	1.045	-0.003	1.000	769995	10.3	1154	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.042	1.045	-0.003		769995	10.0	1154	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	1.056	1.056	0.0	1.000	162117	1.95	26.1	

Reagents:

HFPO_CAL-4_00032 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:15 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08037.d

Injection Date: 08-Feb-2018 13:15:21 Instrument ID: LC_LCMS7

Lims ID: std004

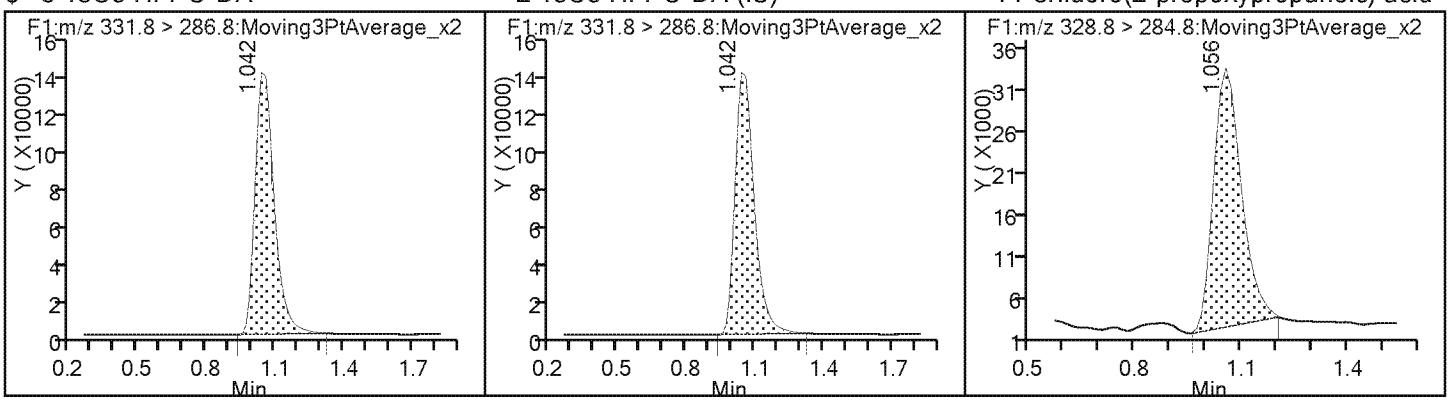
Client ID:

Operator ID: JBH ALS Bottle#: 5 Worklist Smp#: 6

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08038.d
Lims ID: std005
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Feb-2018 13:18:35 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: L5
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:15 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:19:24

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.042	1.045	-0.003		752444	10.0	1072	
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.042	1.045	-0.003	1.000	752444	10.1	1072	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	1.056	1.056	0.0	1.000	421775	5.24	66.0	

Reagents:

HFPO_CAL-5_00080 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:16 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08038.d

Injection Date: 08-Feb-2018 13:18:35 Instrument ID: LC_LCMS7

Lims ID: std005

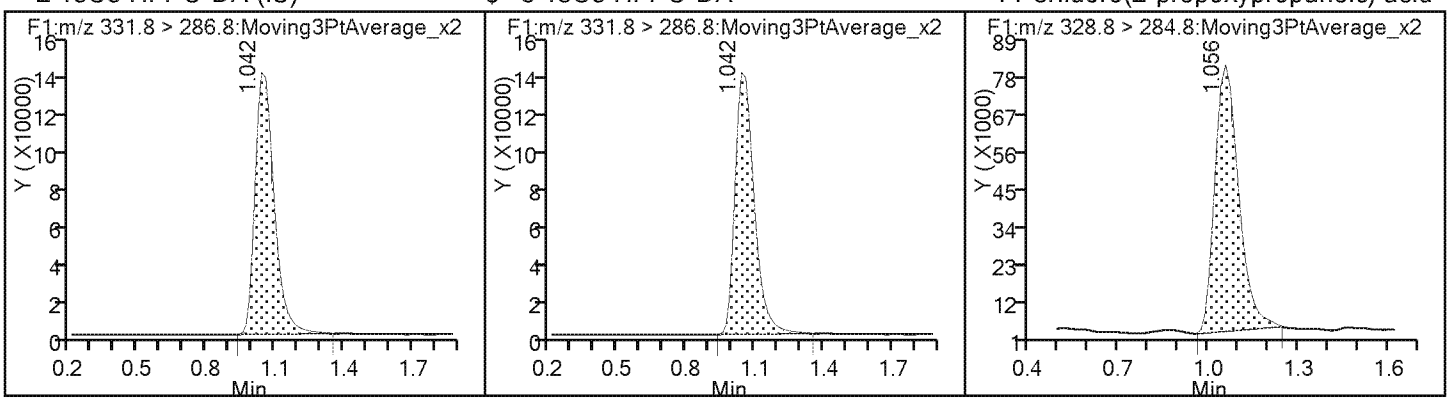
Client ID:

Operator ID: JBH ALS Bottle#: 6 Worklist Smp#: 7

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

* 2 13C3 HFPO-DA (IS) $ 3 13C3 HFPO-DA 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08039.d
Lims ID: std006
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Feb-2018 13:21:49 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: L6
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:16 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:19:26

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.042	1.045	-0.003	1.000	759397	10.2	1193	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.042	1.045	-0.003		759397	10.0	1193	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	1.056	1.056	0.0	1.000	845082	10.4	146	

Reagents:

HFPO_CAL-6_00080 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:16 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08039.d

Injection Date: 08-Feb-2018 13:21:49 Instrument ID: LC_LCMS7

Lims ID: std006

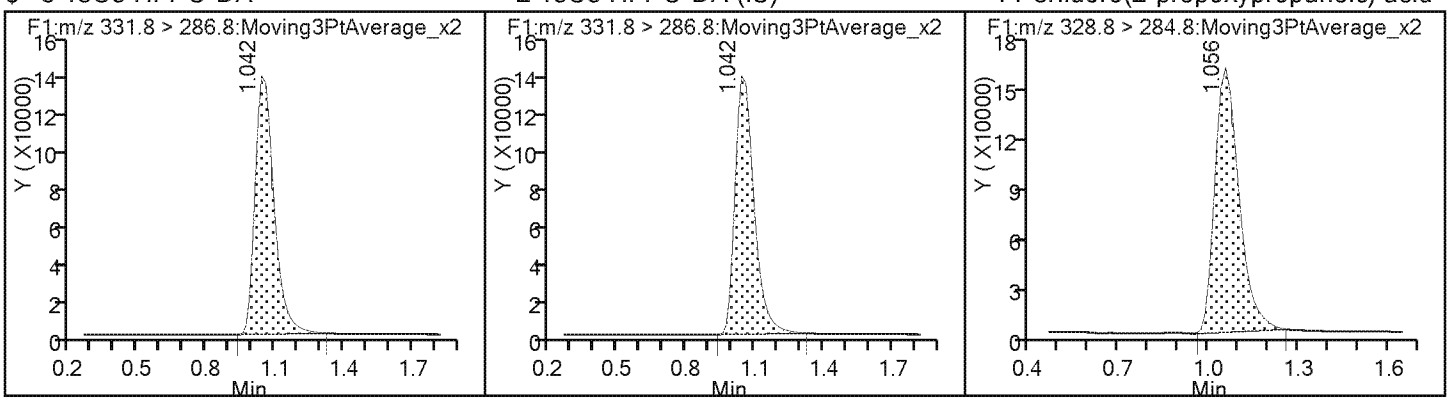
Client ID:

Operator ID: JBH ALS Bottle#: 7 Worklist Smp#: 8

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08040.d
Lims ID: std007
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 08-Feb-2018 13:25:03 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: L7
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:16 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:19:28

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.042	1.045	-0.003		750388	10.0	1247	
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.042	1.045	-0.003	1.000	750388	10.1	1247	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	1.056	1.056	0.0	1.000	2046873	25.6	246	

Reagents:

HFPO_CAL-7_00032 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:17 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08040.d

Injection Date: 08-Feb-2018 13:25:03 Instrument ID: LC_LCMS7

Lims ID: std007

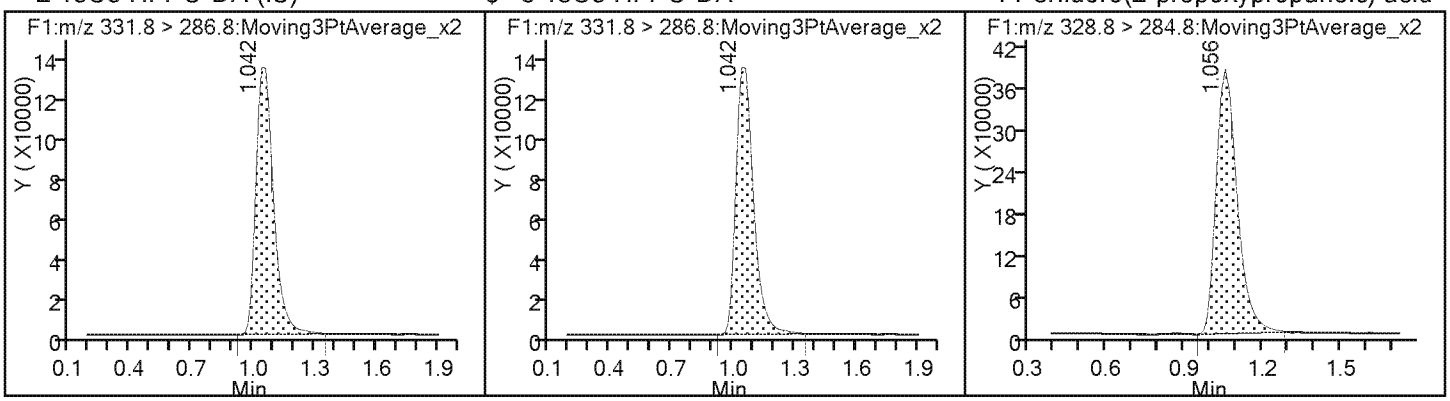
Client ID:

Operator ID: JBH ALS Bottle#: 8 Worklist Smp#: 9

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

* 2 13C3 HFPO-DA (IS) $ 3 13C3 HFPO-DA 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08041.d
Lims ID: std008
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 08-Feb-2018 13:28:18 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: L8
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:17 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:19:30

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.056	1.045	0.011	1.000	736869	9.87	1055	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.056	1.045	0.011		736869	10.0	1055	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	1.056	1.056	0.0	1.000	3929397	50.1	416	

Reagents:

HFPO_CAL-8_00032 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:17 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08041.d

Injection Date: 08-Feb-2018 13:28:18 Instrument ID: LC_LCMS7

Lims ID: std008

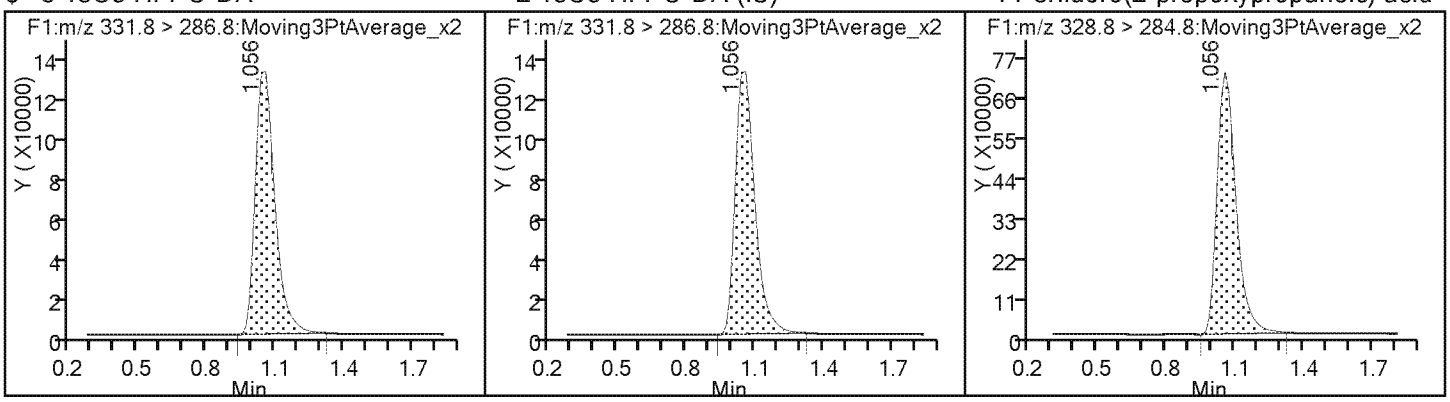
Client ID:

Operator ID: JBH ALS Bottle#: 9 Worklist Smp#: 10

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d
Lims ID: std009
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 08-Feb-2018 13:31:32 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: L9
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:17 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:19:38

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.056	1.045	0.011		712841	10.0	1141	
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.056	1.045	0.011	1.000	712841	9.55	1141	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	1.056	1.056	0.0	1.000	7489478	98.7	561	

Reagents:

HFPO_CAL-9_00001 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:18 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Injection Date: 08-Feb-2018 13:31:32 Instrument ID: LC_LCMS7

Lims ID: std009

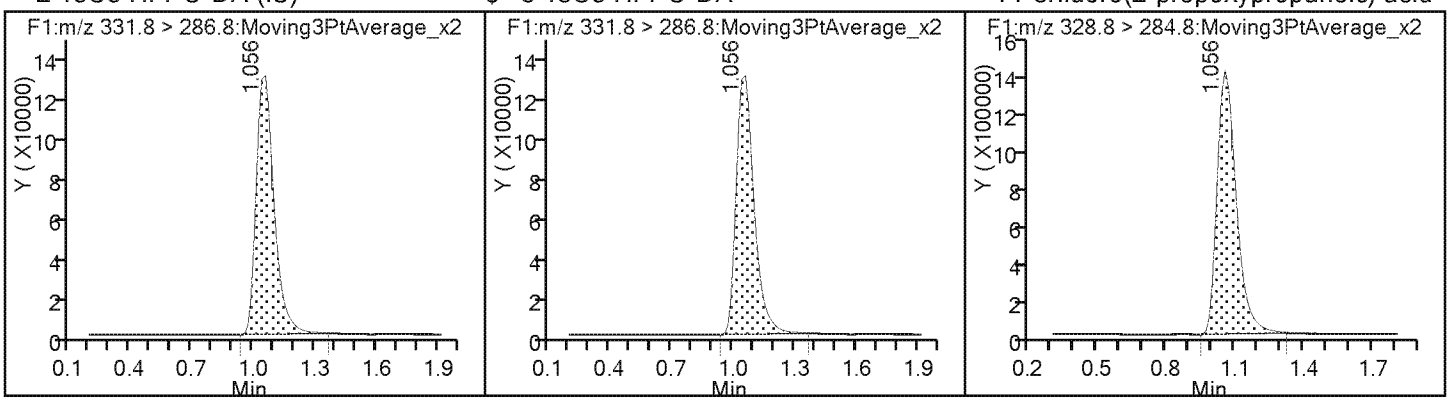
Client ID:

Operator ID: JBH ALS Bottle#: 10 Worklist Smp#: 11

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

* 2 13C3 HFPO-DA (IS) $ 3 13C3 HFPO-DA 1 Perfluoro(2-propoxypropanoic) acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Lab Sample ID: ICV 280-404345/14 Calibration Date: 02/08/2018 13:41

Instrument ID: LC_LCMS7 Calib Start Date: 02/08/2018 13:05

GC Column: Synergi Hydro ID: Calib End Date: 02/08/2018 13:31

Lab File ID: hfpo718B08045.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HFPO-DA	Lin1		1.139		2.05	1.95	5.3	20.0
13C3 HFPO-DA	Ave	74660	76733		10.3	10.0	2.8	

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08045.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Feb-2018 13:41:16 ALS Bottle#: 11 Worklist Smp#: 14
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist:

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:19 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:20:35

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.056	1.045	0.011	1.000	767333	10.3	1367	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.056	1.045	0.011		767333	10.0	1367	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	1.056	1.056	0.0	1.000	170411	2.05	30.8	

Reagents:

HFPO_ICV_00034 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:19 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08045.d

Injection Date: 08-Feb-2018 13:41:16 Instrument ID: LC_LCMS7

Lims ID: ICV

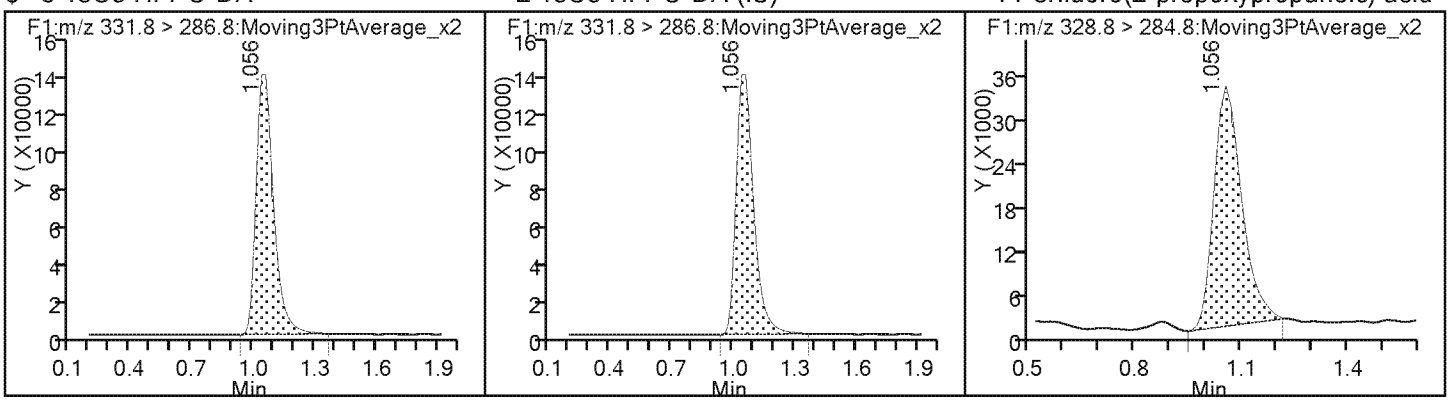
Client ID:

Operator ID: JBH ALS Bottle#: 11 Worklist Smp#: 14

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Lab Sample ID: CCV 280-406058/76 Calibration Date: 02/26/2018 12:35

Instrument ID: LC_LCMS7 Calib Start Date: 02/08/2018 13:05

GC Column: Synergi Hydro ID: Calib End Date: 02/08/2018 13:31

Lab File ID: hfpo718B26086.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HFPO-DA	Lin1		1.168		5.45	5.00	9.1	20.0
13C3 HFPO-DA	Ave	74660	86046		11.5	10.0	15.3	

FORM VII 8321A

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26086.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 26-Feb-2018 12:35:17 ALS Bottle#: 6 Worklist Smp#: 76
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:26:53

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.907	1.045	-0.138	1.000	860457	11.5	1162	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.907	1.045	-0.138		860457	10.0	1162	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.907	1.056	-0.149	1.000	502384	5.45	157	

Reagents:

HFPO_CAL-5_00082 Amount Added: 1.00 Units: mL

Report Date: 26-Feb-2018 13:46:26 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26086.d

Injection Date: 26-Feb-2018 12:35:17 Instrument ID: LC_LCMS7

Lims ID: CCV L5

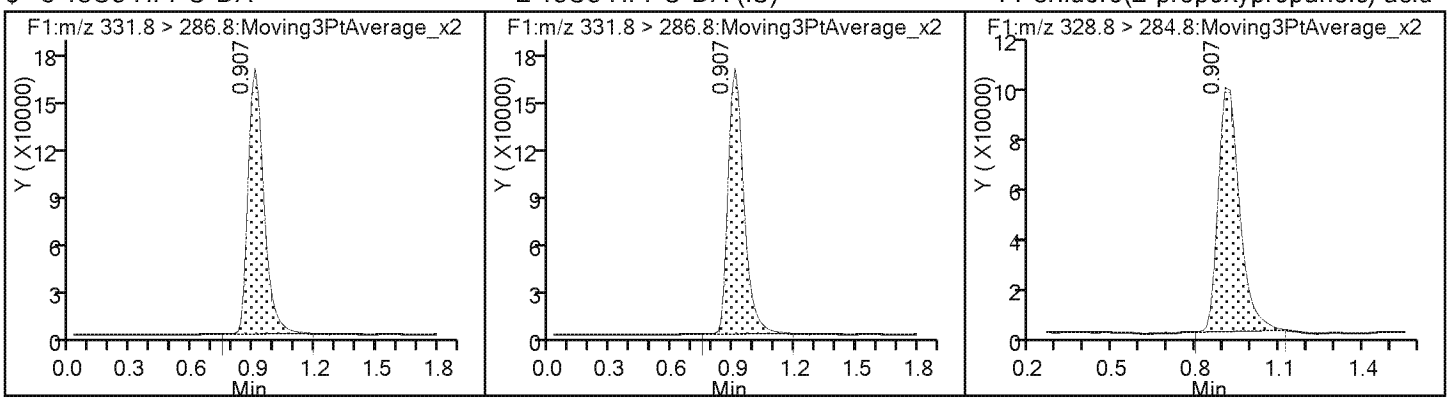
Client ID:

Operator ID: JBH ALS Bottle#: 6 Worklist Smp#: 76

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Lab Sample ID: CCV 280-406058/87 Calibration Date: 02/26/2018 13:11

Instrument ID: LC_LCMS7 Calib Start Date: 02/08/2018 13:05

GC Column: Synergi Hydro ID: Calib End Date: 02/08/2018 13:31

Lab File ID: hfpo718B26097.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HFPO-DA	Lin1		1.059		9.92	10.0	-0.8	20.0
13C3 HFPO-DA	Ave	74660	93745		12.6	10.0	25.6	

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26097.d
Lims ID: CCV L6
Client ID:
Sample Type: CCV
Inject. Date: 26-Feb-2018 13:11:09 ALS Bottle#: 7 Worklist Smp#: 87
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L6
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:49 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:22

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.907	1.045	-0.138	1.000	937445	12.6	1219	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.907	1.045	-0.138		937445	10.0	1219	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.907	1.056	-0.149	1.000	992366	9.92	318	

Reagents:

HFPO_CAL-6_00082 Amount Added: 1.00 Units: mL

Report Date: 26-Feb-2018 13:46:50 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26097.d

Injection Date: 26-Feb-2018 13:11:09 Instrument ID: LC_LCMS7

Lims ID: CCV L6

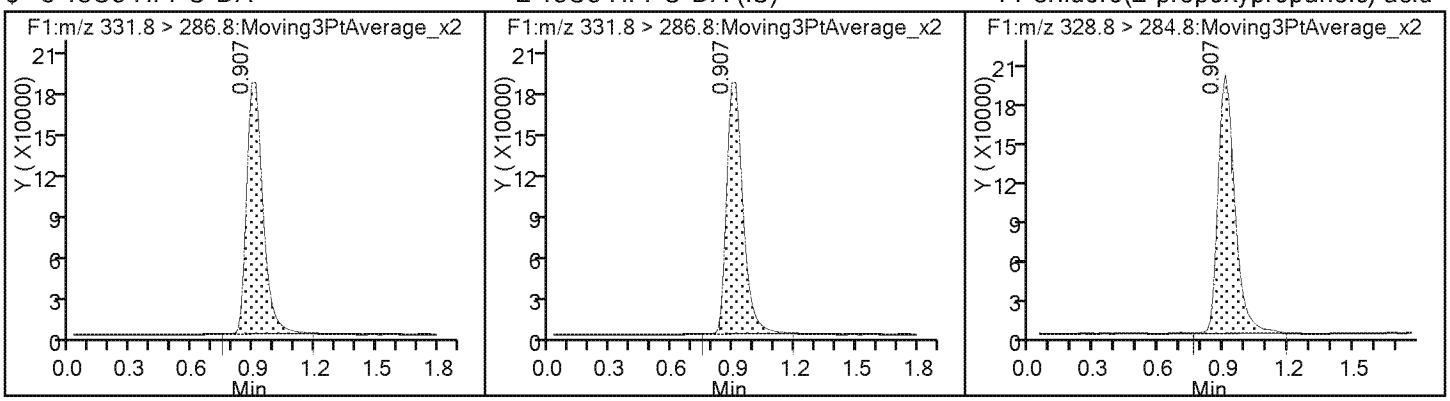
Client ID:

Operator ID: JBH ALS Bottle#: 7 Worklist Smp#: 87

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Lab Sample ID: CCV 280-406058/98 Calibration Date: 02/26/2018 13:47

Instrument ID: LC_LCMS7 Calib Start Date: 02/08/2018 13:05

GC Column: Synergi Hydro ID: Calib End Date: 02/08/2018 13:31

Lab File ID: hfpo718B26108.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HFPO-DA	Lin1		1.168		5.46	5.00	9.1	20.0
13C3 HFPO-DA	Ave	74660	86888		11.6	10.0	16.4	

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26108.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 26-Feb-2018 13:47:38 ALS Bottle#: 6 Worklist Smp#: 98
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 14:43:22 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 14:41:45

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.893	1.045	-0.152	1.000	868881	11.6	1095	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.893	1.045	-0.152		868881	10.0	1095	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.907	1.056	-0.149	1.000	507528	5.46	133	

Reagents:

HFPO_CAL-5_00082 Amount Added: 1.00 Units: mL

Report Date: 26-Feb-2018 14:43:22 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26108.d

Injection Date: 26-Feb-2018 13:47:38 Instrument ID: LC_LCMS7

Lims ID: CCV L5

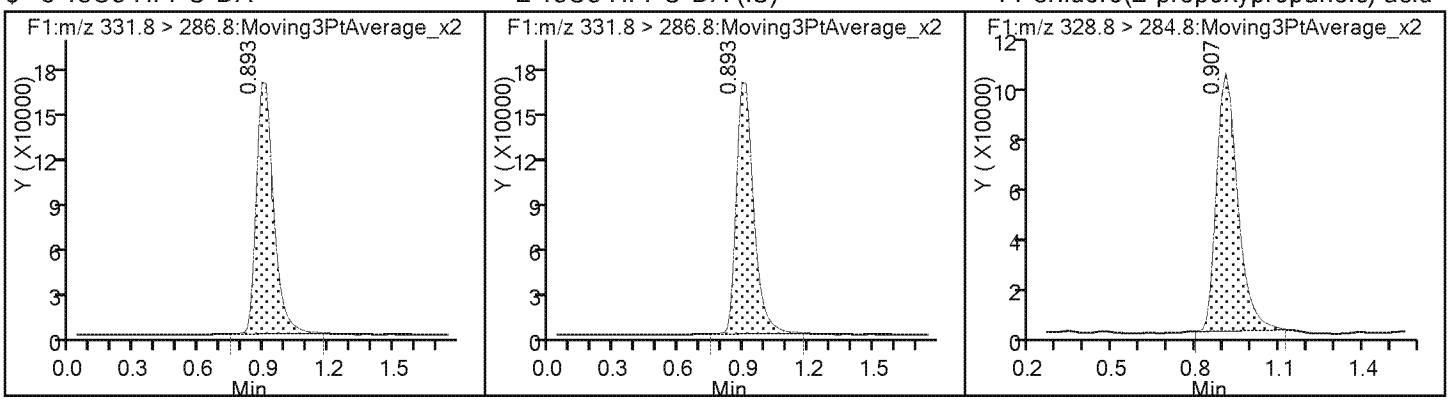
Client ID:

Operator ID: JBH ALS Bottle#: 6 Worklist Smp#: 98

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Lab Sample ID: CCV 280-406060/131 Calibration Date: 02/26/2018 15:38

Instrument ID: LC_LCMS7 Calib Start Date: 02/08/2018 13:05

GC Column: Synergi Hydro ID: Calib End Date: 02/08/2018 13:31

Lab File ID: hfpo718B26142.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HFPO-DA	Lin1		1.190		5.56	5.00	11.2	20.0
13C3 HFPO-DA	Ave	74660	88647		11.9	10.0	18.7	

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26142.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 26-Feb-2018 15:38:43 ALS Bottle#: 6 Worklist Smp#: 131
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:49:41 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:44:59

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.920	1.045	-0.125	1.000	886469	11.9	1790	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.920	1.045	-0.125		886469	10.0	1790	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.920	1.056	-0.136	1.000	527293	5.56	127	

Reagents:

HFPO_CAL-5_00082 Amount Added: 1.00 Units: mL

Report Date: 27-Feb-2018 07:49:42 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26142.d

Injection Date: 26-Feb-2018 15:38:43 Instrument ID: LC_LCMS7

Lims ID: CCV L5

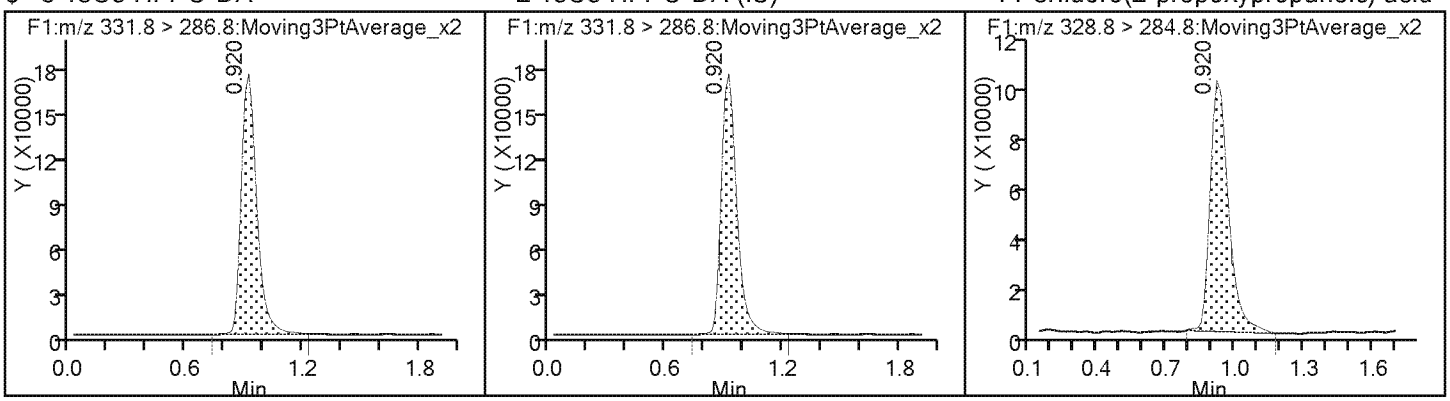
Client ID:

Operator ID: JBH ALS Bottle#: 6 Worklist Smp#: 131

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Lab Sample ID: CCV 280-406060/142 Calibration Date: 02/26/2018 16:14

Instrument ID: LC_LCMS7 Calib Start Date: 02/08/2018 13:05

GC Column: Synergi Hydro ID: Calib End Date: 02/08/2018 13:31

Lab File ID: hfpo718B26153.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HFPO-DA	Lin1		0.998		9.35	10.0	-6.5	20.0
13C3 HFPO-DA	Ave	74660	96777		13.0	10.0	29.6	

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26153.d
Lims ID: CCV L6
Client ID:
Sample Type: CCV
Inject. Date: 26-Feb-2018 16:14:39 ALS Bottle#: 7 Worklist Smp#: 142
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L6
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:49:51 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:46:48

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.893	1.045	-0.152	1.000	967771	13.0	1223	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.893	1.045	-0.152		967771	10.0	1223	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.907	1.056	-0.149	1.000	965957	9.35	264	

Reagents:

HFPO_CAL-6_00082 Amount Added: 1.00 Units: mL

Report Date: 27-Feb-2018 07:49:52 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26153.d

Injection Date: 26-Feb-2018 16:14:39 Instrument ID: LC_LCMS7

Lims ID: CCV L6

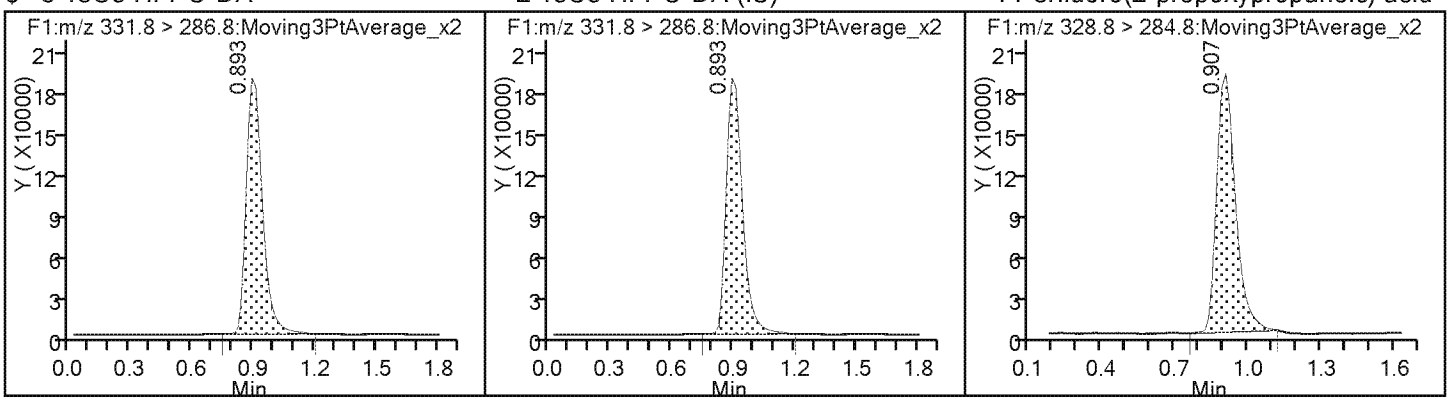
Client ID:

Operator ID: JBH ALS Bottle#: 7 Worklist Smp#: 142

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Lab Sample ID: CCV 280-406060/153 Calibration Date: 02/26/2018 16:50

Instrument ID: LC_LCMS7 Calib Start Date: 02/08/2018 13:05

GC Column: Synergi Hydro ID: Calib End Date: 02/08/2018 13:31

Lab File ID: hfpo718B26164.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HFPO-DA	Lin1		1.168		5.45	5.00	9.1	20.0
13C3 HFPO-DA	Ave	74660	86438		11.6	10.0	15.8	

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26164.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 26-Feb-2018 16:50:38 ALS Bottle#: 6 Worklist Smp#: 153
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:50:01 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:47:59

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.893	1.045	-0.152	1.000	864378	11.6	1161	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.893	1.045	-0.152		864378	10.0	1161	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.907	1.056	-0.149	1.000	504708	5.45	192	

Reagents:

HFPO_CAL-5_00082 Amount Added: 1.00 Units: mL

Report Date: 27-Feb-2018 07:50:01 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26164.d

Injection Date: 26-Feb-2018 16:50:38 Instrument ID: LC_LCMS7

Lims ID: CCV L5

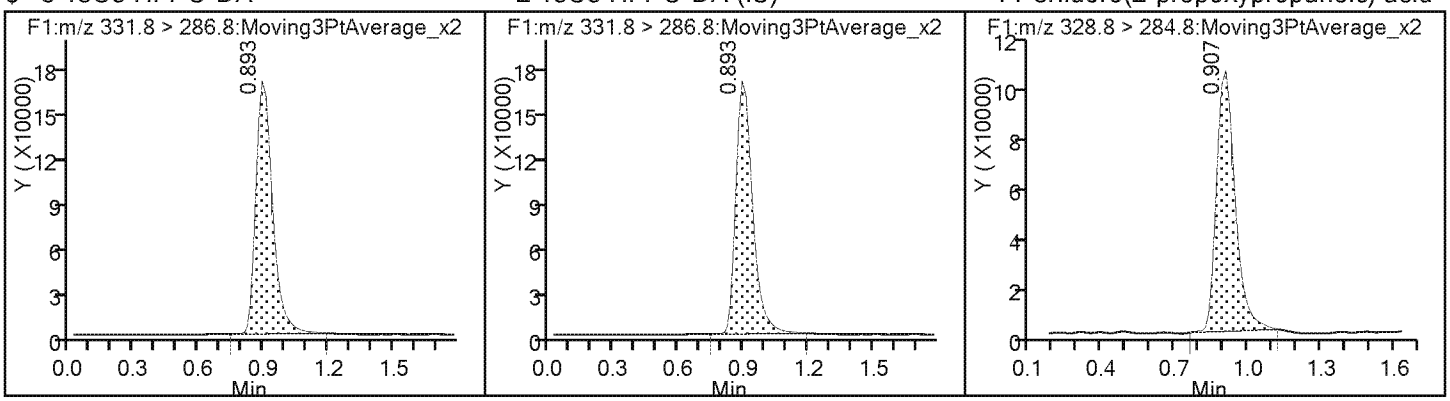
Client ID:

Operator ID: JBH ALS Bottle#: 6 Worklist Smp#: 153

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Lab Sample ID: CCV 280-406060/160 Calibration Date: 02/26/2018 17:13

Instrument ID: LC_LCMS7 Calib Start Date: 02/08/2018 13:05

GC Column: Synergi Hydro ID: Calib End Date: 02/08/2018 13:31

Lab File ID: hfpo718B26171.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HFPO-DA	Lin1		1.031		9.66	10.0	-3.4	20.0
13C3 HFPO-DA	Ave	74660	95876		12.8	10.0	28.4	

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26171.d
Lims ID: CCV L6
Client ID:
Sample Type: CCV
Inject. Date: 26-Feb-2018 17:13:14 ALS Bottle#: 7 Worklist Smp#: 160
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L6
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7
Sublist: chrom-HFPO*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:50:07 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:48:36

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.893	1.045	-0.152	1.000	958760	12.8	1115	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.893	1.045	-0.152		958760	10.0	1115	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.907	1.056	-0.149	1.000	988261	9.66	275	

Reagents:

HFPO_CAL-6_00082 Amount Added: 1.00 Units: mL

Report Date: 27-Feb-2018 07:50:07 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26171.d

Injection Date: 26-Feb-2018 17:13:14 Instrument ID: LC_LCMS7

Lims ID: CCV L6

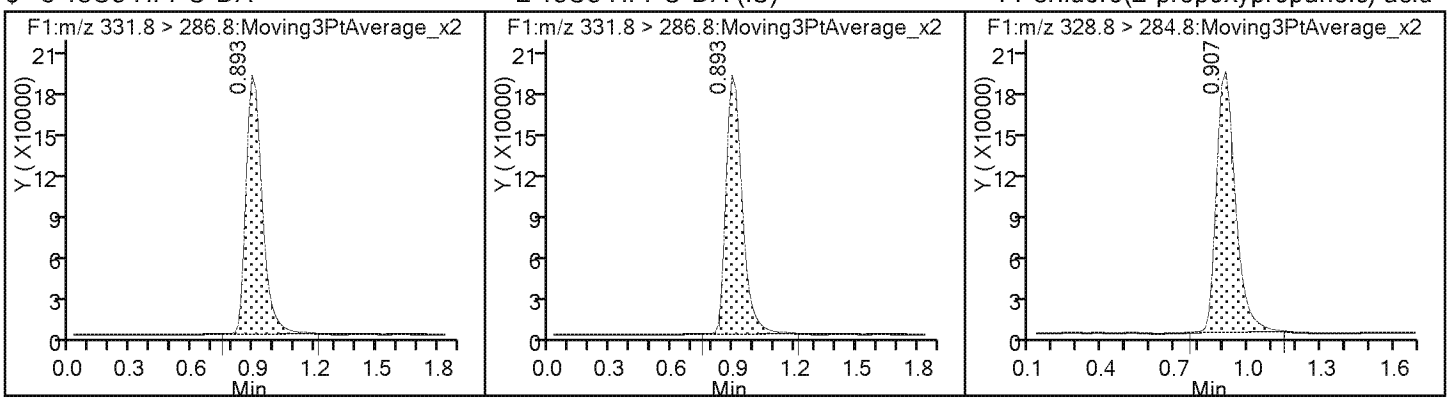
Client ID:

Operator ID: JBH ALS Bottle#: 7 Worklist Smp#: 160

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

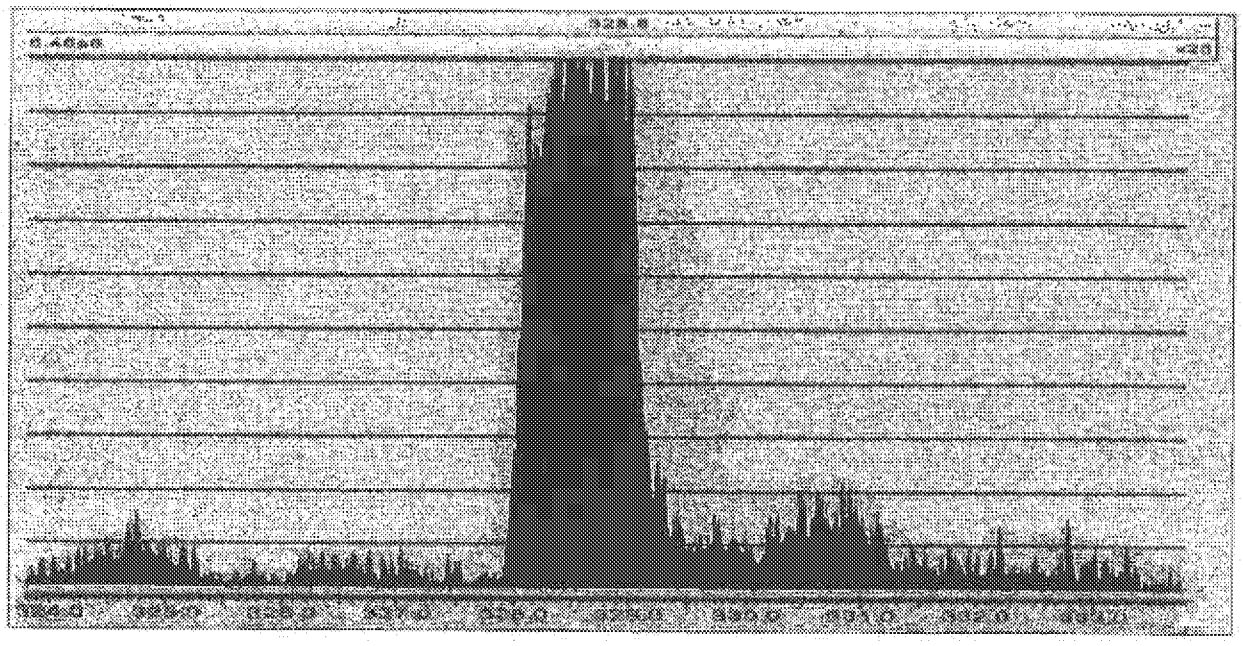
$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



File: C:\MassLynx\6321.PRO\ACQUDB\HFPOMRM.ipr

Instrument: XEVO-TQMS#VBA453

Printed: Monday, February 26, 2018 07:00:13 Mountain Standard Time



Type	Start Mass	End Mass	Set Mass
MS1 Scan	323.80	333.80	

Source (ES-)	Settings	Readbacks
Capillary (kV)	0.50	0.52
Cone (V)	10.00	-21.08
Extractor (V)	3.00	-10.61
Source Temperature (°C)	120	120
Desolvation Temperature (°C)	200	199
Cone Gas Flow (L/Hr)	50	50
Desolvation Gas Flow (L/Hr)	800	799
Collision Gas Flow (mL/Min)	0.15	0.04

Analyser	Settings	Readbacks
LM 1 Resolution	2.8	
HM 1 Resolution	14.8	
Ion Energy 1	0.7	
MS Mode Collision Energy	7.00	
MSMS Mode Collision Energy	20.00	
MS Mode Entrance	0.50	
MS Mode Exit	0.50	
Gas On MS Mode Entrance	0.50	
Gas On MS Mode Exit	0.50	
Gas On MSMS Mode Entrance	0.50	
Gas On MSMS Mode Exit	0.50	
Gas Off MS Mode Entrance	30.00	
Gas Off MS Mode Exit	30.00	
Gas Off MSMS Mode Entrance	2.00	
Gas Off MSMS Mode Exit	2.00	
ScanWave MS Mode Entrance	0.50	
ScanWave MS Mode Exit	0.50	
ScanWave MSMS Mode Entrance	0.50	
ScanWave MSMS Mode Exit	0.50	
LM 2 Resolution	2.9	
HM 2 Resolution	14.7	
Ion Energy 2	0.3	

File: C:\MassLynx\8321.PRO\ACQUDB\HFPOMRM.ipr

Instrument: XEVO-TQMS/VBA463

Printed: Monday, February 26, 2018 07:00:13 Mountain Standard Time

Multiplier	624.05
Active Reservoir	A

Pressure Gauges

Collision Cell Pressure (mbar)	7.878782e-005

Instrument Configuration

Automatic Mode

MS Inter-scan delay (secs)	0.005	
Polarity/Mode switch inter-scan delay (secs)		0.020
Enhanced Inter-scan delay (secs)		0.020

Inter-channel delay - See Tables

MS 1 Delay Table:

R	delay
<= 0.500	0.005
<= 2.000	0.008
<= 4.000	0.010
<= 11.000	0.012
> 11.000	0.014

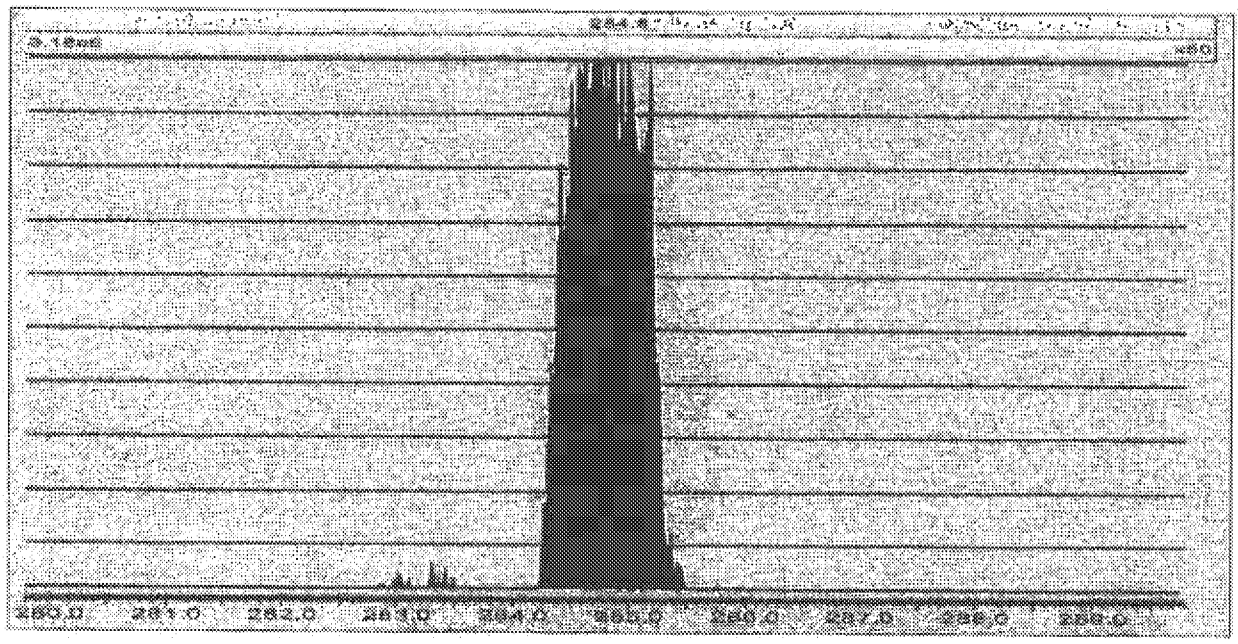
MS 2 Delay Table:

R	delay
<= 8.000	0.005
<= 25.000	0.006
> 25.000	0.007

File: C:\MassLynx\6321.PRO\ACQUDB\HFPOMRM.ipr

Instrument: XEVO-TQMS/VBA453

Printed: Monday, February 28, 2018 07:01:08 Mountain Standard Time



Type	Start Mass	End Mass	Set Mass
Daughter Scan	279.80	289.80	328.80

Source (ES-)	Settings	Readbacks
Capillary (kV)	0.50	0.54
Cone (V)	10.00	-20.42
Extractor (V)	3.00	-10.61
Source Temperature (°C)	120	120
Desolvation Temperature (°C)	200	200
Cone Gas Flow (L/Hr)	50	50
Desolvation Gas Flow (L/Hr)	800	791
Collision Gas Flow (mL/Min)	0.15	0.14

Analyser	Settings	Readbacks
LM 1 Resolution	2.8	
HM 1 Resolution	14.8	
Ion Energy 1	0.7	
MS Mode Collision Energy	7.00	
MSMS Mode Collision Energy	20.00	
MS Mode Entrance	0.50	
MS Mode Exit	0.50	
Gas On MS Mode Entrance	0.50	
Gas On MS Mode Exit	0.50	
Gas On MSMS Mode Entrance	0.50	
Gas On MSMS Mode Exit	0.50	
Gas Off MS Mode Entrance	30.00	
Gas Off MS Mode Exit	30.00	
Gas Off MSMS Mode Entrance	2.00	
Gas Off MSMS Mode Exit	2.00	
ScanWave MS Mode Entrance	0.50	
ScanWave MS Mode Exit	0.50	
ScanWave MSMS Mode Entrance	0.50	
ScanWave MSMS Mode Exit	0.50	
LM 2 Resolution	2.9	
HM 2 Resolution	14.7	
Ion Energy 2	0.3	

File: C:\MassLynx\8321.PRO\ACQUDB\HFPOMRM.ipr

Instrument: XEVO-TQMS#VBA453

Printed: Monday, February 26, 2018 07:01:08 Mountain Standard Time

Multiplier	523.81
Active Reservoir	A

Pressure Gauges

Collision Cell Pressure (mbar)	1.243088e-003

Instrument Configuration

Automatic Mode

MS Inter-scan delay (secs)	0.005	
Polarity/Mode switch Inter-scan delay (secs)		0.020
Enhanced Inter-scan delay (secs)		0.020

Inter-channel delay - See Tables

MS 1 Delay Table:

	R	delay
<=	0.500	0.005
<=	2.000	0.008
<=	4.000	0.010
<=	11.000	0.012
>	11.000	0.014

MS 2 Delay Table:

	R	delay
<=	6.000	0.005
<=	25.000	0.005
>	25.000	0.007

File: c:\masslynx\8321.pro\acqudb\hfpo.exp

Printed: Monday, February 28, 2018 07:01:36 Mountain Standard Time

Creation Time	Fri 18 Nov 2016 09:08:40
Instrument Identifier	XEVO-TQMS#VBA453
Version Number	1.0
Duration (min)	2.0
Calibration Filename	C:\MassLynx\IntelliStart\Results\Unit Mass Resolution\Calibration_20100811_2.cal
Solvent Delay Divert Valve Enabled	0
Number Of Functions	1

Function 1 : MRM of 2 mass pairs, Time 0.00 to 2.00, ES-

Type	MRM
Ion Mode	ES-
Inter Channel Delay (sec)	-1.000
InterScan Time (sec)	-1.000
Span (Da)	0.6
Start Time (min)	0.0
End Time (min)	2.0

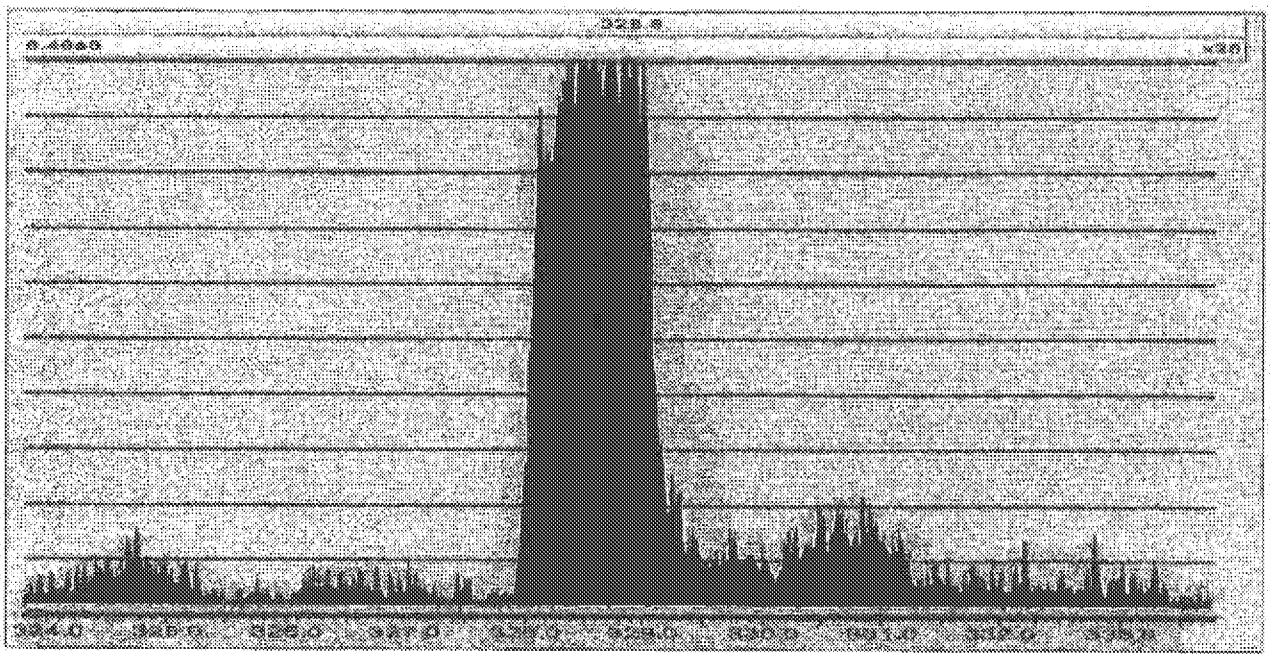
Ch	Prnt(Da)	Dau(Da)	Dwell(s)	Cone(V)	Coll(eV)	Delay(s)	Compound
1	328.80	284.80	0.400	10.00	7.00	-1.000	HFPO
2	331.80	286.80	0.400	10.00	7.00	-1.000	HFPO IS

Pharmaceuticals

File: C:\MassLynx\8321.PRO\ACQUDB\HFPOMRM.ipr

Instrument: XEVO-TQMS\VBA453

Printed: Monday, February 26, 2018 07:00:13 Mountain Standard Time



Type	Start Mass	End Mass	Set Mass
MS1 Scan	323.80	333.80	

Source (ES-)	Settings	Readbacks
Capillary (kV)	0.50	0.62
Cone (V)	10.00	-21.06
Extractor (V)	3.00	-10.61
Source Temperature (°C)	120	120
Desolvation Temperature (°C)	200	199
Cone Gas Flow (L/Hr)	50	50
Desolvation Gas Flow (L/Hr)	800	796
Collision Gas Flow (mL/Min)	0.15	0.04

Analyser	Settings	Readbacks
LM 1 Resolution	2.8	
HM 1 Resolution	14.8	Oudpran 2/26/18
Ion Energy 1	0.7	
MS Mode Collision Energy	7.00	
MSMS Mode Collision Energy	20.00	
MS Mode Entrance	0.50	
MS Mode Exit	0.50	
Gas On MS Mode Entrance	0.50	
Gas On MS Mode Exit	0.50	
Gas On MSMS Mode Entrance	0.50	
Gas On MSMS Mode Exit	0.50	
Gas Off MS Mode Entrance	30.00	
Gas Off MS Mode Exit	30.00	
Gas Off MSMS Mode Entrance	2.00	
Gas Off MSMS Mode Exit	2.00	
ScanWave MS Mode Entrance	0.50	
ScanWave MS Mode Exit	0.50	
ScanWave MSMS Mode Entrance	0.50	
ScanWave MSMS Mode Exit	0.50	
LM 2 Resolution	2.9	
HM 2 Resolution	14.7	
Ion Energy 2	0.3	

Multiplier	524.05
Active Reservoir	A

Pressure Gauges

Collision Cell Pressure (mbar)	7.578782e-006

Instrument Configuration

Automatic Mode

MS Inter-scan delay (secs)	0.005
Polarity/Mode switch Inter-scan delay (secs)	0.020
Enhanced Inter-scan delay (secs)	0.020

Inter-channel delay - See Tables

MS 1 Delay Table:

	R	delay
<=	0.500	0.005
<=	2.000	0.008
<=	4.000	0.010
<=	11.000	0.012
>	11.000	0.014

MS 2 Delay Table:

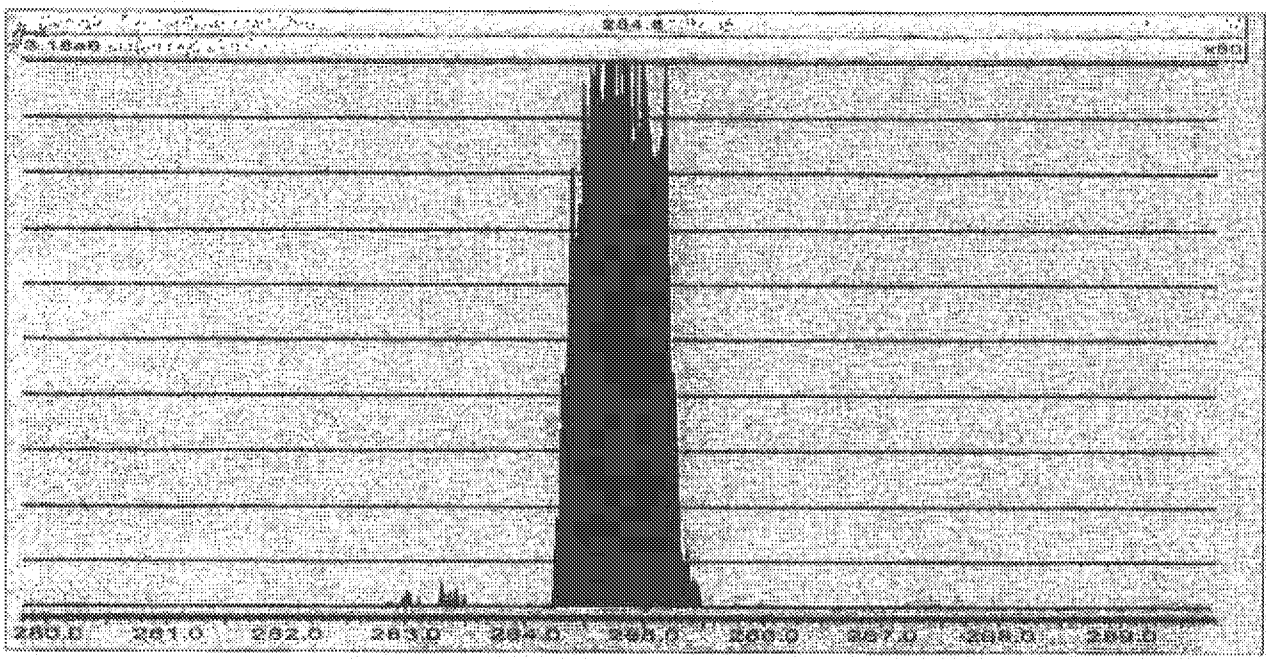
	R	delay
<=	8.000	0.005
<=	25.000	0.005
>	25.000	0.007

2/28/18

File: C:\MassLynx\8321.PROVACQUDB\HFPOMRM.ipr

Instrument: XEVO-TQMS#VBA453

Printed: Monday, February 26, 2018 07:01:08 Mountain Standard Time



Type	Start Mass	End Mass	Set Mass
Daughter Scan	279.80	289.80	328.60

Source (ES-)	Settings	Readbacks
Capillary (kV)	0.50	0.54
Cone (V)	10.00	-20.42
Extractor (V)	3.00	-10.61
Source Temperature (°C)	120	120
Desolvation Temperature (°C)	200	200
Cone Gas Flow (L/Hr)	50	50
Desolvation Gas Flow (L/Hr)	800	791
Collision Gas Flow (mL/Min)	0.15	0.14

Analyser	Settings	Readbacks
LM 1 Resolution	2.8	
HM 1 Resolution	14.8	
Ion Energy 1	0.7	
MS Mode Collision Energy	7.00	
MSMS Mode Collision Energy	20.00	
MS Mode Entrance	0.50	
MS Mode Exit	0.50	
Gas On MS Mode Entrance	0.50	
Gas On MS Mode Exit	0.50	
Gas On MSMS Mode Entrance	0.50	
Gas On MSMS Mode Exit	0.50	
Gas Off MS Mode Entrance	30.00	
Gas Off MS Mode Exit	30.00	
Gas Off MSMS Mode Entrance	2.00	
Gas Off MSMS Mode Exit	2.00	
ScanWave MS Mode Entrance	0.50	
ScanWave MS Mode Exit	0.50	
ScanWave MSMS Mode Entrance	0.50	
ScanWave MSMS Mode Exit	0.50	
LM 2 Resolution	2.9	
HM 2 Resolution	14.7	
Ion Energy 2	0.3	

Adaptas 2/28/18

File: C:\MassLynx\6321.PRO\ACQUDB\HFPOMRM.ipr

Instrument: XEVO-TQMS#VBA453

Printed: Monday, February 26, 2018 07:01:08 Mountain Standard Time

Multiplier	523.81
Active Reservoir	A

Pressure Gauges

Collision Cell Pressure (mbar)	1.243096e-003

Instrument Configuration

Automatic Mode

MS Inter-scan delay (secs)	0.005
Polarity/Mode switch Inter-scan delay (secs)	0.020
Enhanced Inter-scan delay (secs)	0.020

Inter-channel delay - See Tables

MS 1 Delay Table:

	R	delay
<=	0.500	0.005
<=	2.000	0.008
<=	4.000	0.010
<=	11.000	0.012
>	11.000	0.014

MS 2 Delay Table:

	R	delay
<=	8.000	0.005
<=	25.000	0.005
>	25.000	0.007

2/28/2018

File: c:\masslynx\8321.pro\acqudb\hfpo.exp

Printed: Monday, February 26, 2018 07:01:36 Mountain Standard Time

Creation Time	Fri 18 Nov 2016 09:08:40
Instrument Identifier	XEVO-TQMS#VBA463
Version Number	1.0
Duration (min)	2.0
Calibration Filename	C:\MassLynx\IntelliStart\Results\Unit Mass Resolution\Calibration_20100811_2.cal
Solvent Delay Divert Valve Enabled	0
Number Of Functions	1

Function 1 : MRM of 2 mass pairs, Time 0.00 to 2.00, ES-

Type	MRM
Ion Mode	ES-
Inter Channel Delay (sec)	-1.000
InterScan Time (sec)	-1.000
Span (Da)	0.5
Start Time (min)	0.0
End Time (min)	2.0

Ch	Pmt(Da)	Dau(Da)	Dwell(s)	Cone(V)	Coll(eV)	Delay(s)	Compound
1	328.80	284.80	0.400	10.00	7.00	-1.000	HFPO
2	331.80	286.80	0.400	10.00	7.00	-1.000	HFPO IS

2/28/18.

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-406000/1-A

Matrix: Water | Lab File ID: hfpo718B26143.d

Analysis Method: 8321A | Date Collected:

Extraction Method: 3535 | Date Extracted: 02/23/2018 21:44

Sample wt/vol: 250(mL) | Date Analyzed: 02/26/2018 15:41

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406060 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	<0.010		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	114		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26143.d
Lims ID: MB 280-406000/1-A
Client ID:
Sample Type: MB
Inject. Date: 26-Feb-2018 15:41:57 ALS Bottle#: 30 Worklist Smp#: 132
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: MB280-406000/1-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:49:41 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:45:14

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								M
331.8 > 286.8	0.920	1.045	-0.125	1.000	854549	11.4	733	M
* 2 13C3 HFPO-DA (IS)								M
331.8 > 286.8	0.920	1.045	-0.125		854549	10.0	733	M

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 27-Feb-2018 07:49:43 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26143.d

Injection Date: 26-Feb-2018 15:41:57 Instrument ID: LC_LCMS7

Lims ID: MB 280-406000/1-A

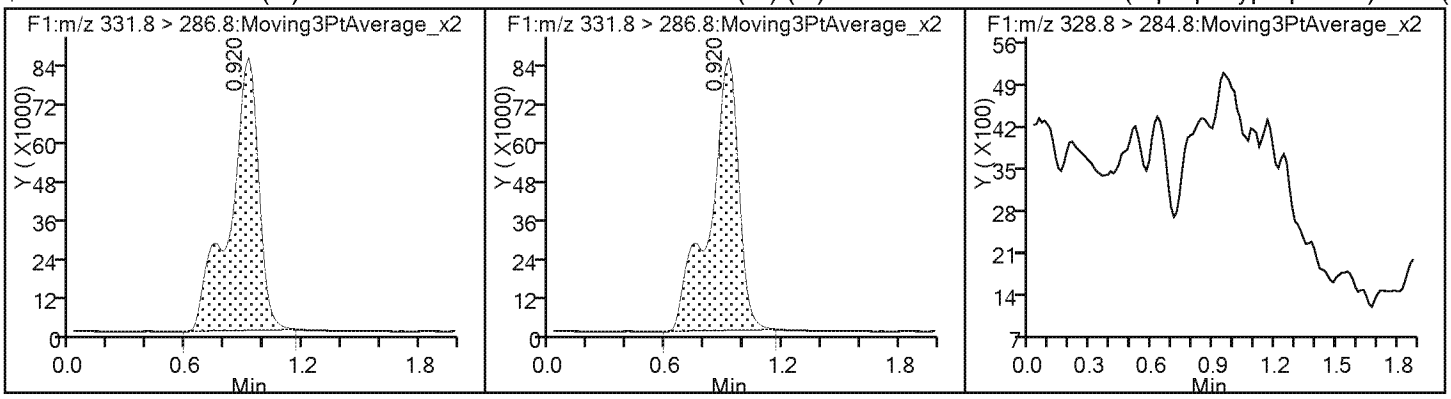
Client ID:

Operator ID: JBH ALS Bottle#: 30 Worklist Smp#: 132

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA (M) * 2 13C3 HFPO-DA (IS) (M) 1 Perfluoro(2-propoxypropanoic) acid (ND)



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26143.d
Lims ID: MB 280-406000/1-A
Client ID:
Sample Type: MB
Inject. Date: 26-Feb-2018 15:41:57 ALS Bottle#: 30 Worklist Smp#: 132
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: MB280-406000/1-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:49:41 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:45:14

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	11.4	114.46

Manual Integration/User Assign Peak Report

TestAmerica Denver

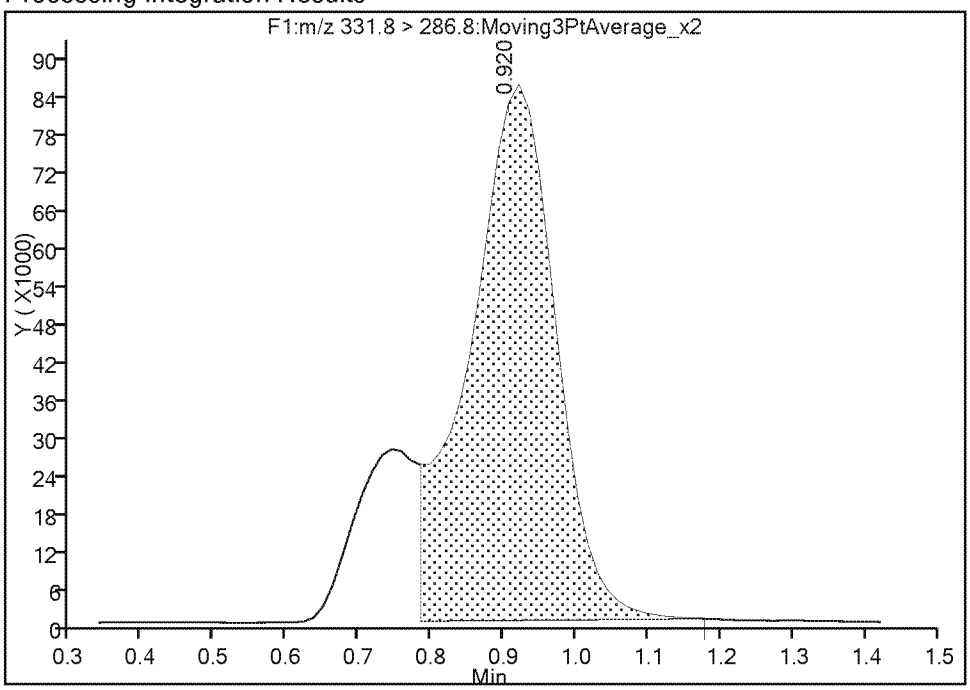
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26143.d				
Injection Date:	26-Feb-2018 15:41:57	Instrument ID:	LC_LCMS7		
Lims ID:	MB 280-406000/1-A				
Client ID:					
Operator ID:	JBH	ALS Bottle#:	30	Worklist Smp#:	132
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		
Column:		Detector	F1:MRM		

$ 3 13C3 HFPO-DA, CAS: STL02255

Signal: 1

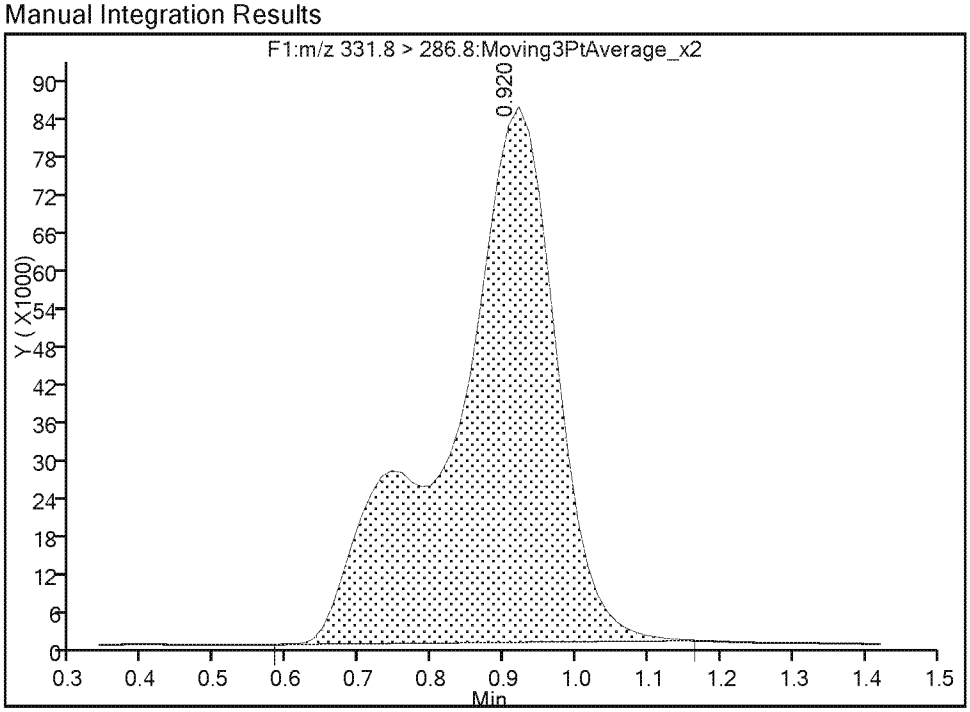
Processing Integration Results

RT: 0.92
Area: 694799
Amount: 9.306190
Amount Units: ug/l



Manual Integration Results

RT: 0.92
Area: 854549
Amount: 11.445893
Amount Units: ug/l



Reviewer: meyera, 27-Feb-2018 07:45:11

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-406019/1-A

Matrix: Water | Lab File ID: hfpo718B26087.d

Analysis Method: 8321A | Date Collected:

Extraction Method: 3535 | Date Extracted: 02/24/2018 20:22

Sample wt/vol: 250(mL) | Date Analyzed: 02/26/2018 12:38

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	<0.010		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	113		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26087.d
Lims ID: MB 280-406019/1-A
Client ID:
Sample Type: MB
Inject. Date: 26-Feb-2018 12:38:32 ALS Bottle#: 18 Worklist Smp#: 77
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: MB280-406019/1-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:26:55

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.920	1.045	-0.125	1.000	842212	11.3	1314	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.920	1.045	-0.125		842212	10.0	1314	

Report Date: 26-Feb-2018 13:46:28 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26087.d

Injection Date: 26-Feb-2018 12:38:32 Instrument ID: LC_LCMS7

Lims ID: MB 280-406019/1-A

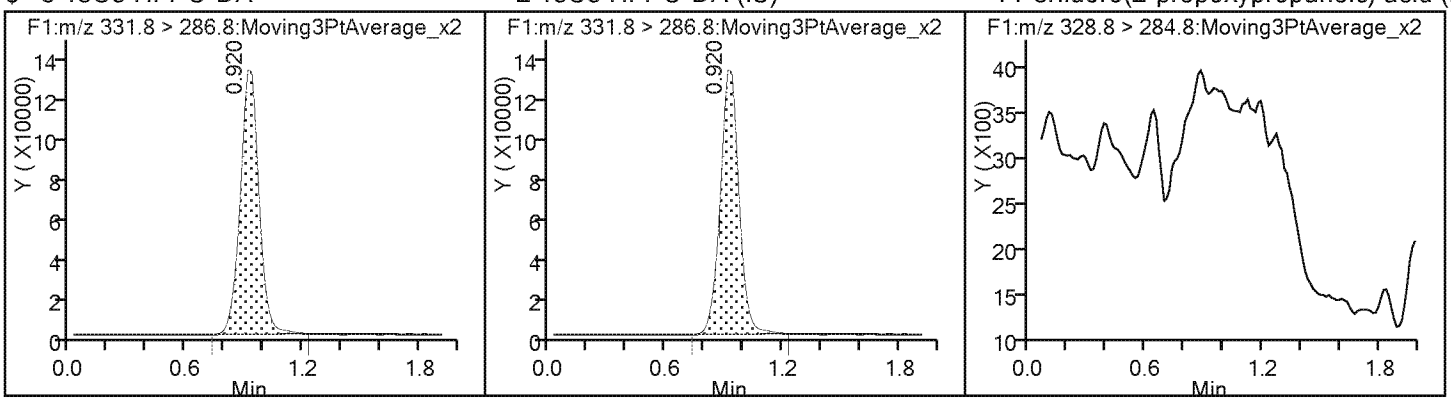
Client ID:

Operator ID: JBH ALS Bottle#: 18 Worklist Smp#: 77

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid (ND)



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26087.d				
Lims ID:	MB 280-406019/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	26-Feb-2018 12:38:32	ALS Bottle#:	18	Worklist Smp#:	77
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB280-406019/1-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 13:46:25	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 13:26:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	11.3	112.81

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: | Lab Sample ID: ICB 280-404345/12

Matrix: Water | Lab File ID: hfpo718B08043.d

Analysis Method: 8321A | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 1(mL) | Date Analyzed: 02/08/2018 13:34

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 404345 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	<0.50		0.50	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	103		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08043.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 08-Feb-2018 13:34:46 ALS Bottle#: 1 Worklist Smp#: 12
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ICB
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:17 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:19:42

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.056	1.045	0.011	1.000	772269	10.3	1251	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.056	1.045	0.011		772269	10.0	1251	

Reagents:

HFPO_CAL-0_00032 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:18 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08043.d

Injection Date: 08-Feb-2018 13:34:46 Instrument ID: LC_LCMS7

Lims ID: ICB

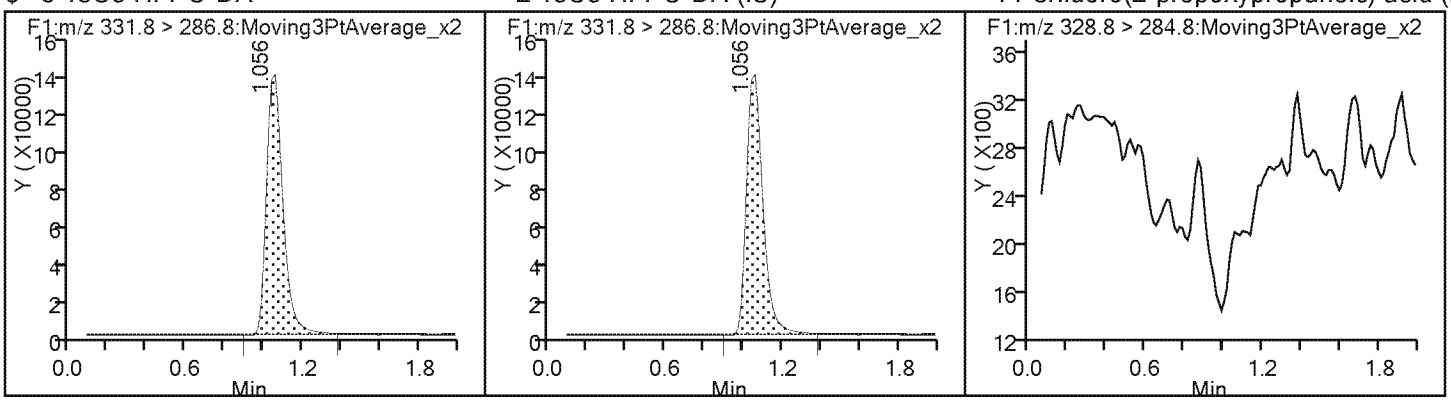
Client ID:

Operator ID: JBH ALS Bottle#: 1 Worklist Smp#: 12

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid (ND)



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08043.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 08-Feb-2018 13:34:46 ALS Bottle#: 1 Worklist Smp#: 12
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ICB
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:17 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:19:42

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	10.3	103.44

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-406000/2-A

Matrix: Water | Lab File ID: hfpo718B26144.d

Analysis Method: 8321A | Date Collected:

Extraction Method: 3535 | Date Extracted: 02/23/2018 21:44

Sample wt/vol: 250(mL) | Date Analyzed: 02/26/2018 15:45

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406060 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.189		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	113		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26144.d
Lims ID: LCS 280-406000/2-A
Client ID:
Sample Type: LCS
Inject. Date: 26-Feb-2018 15:45:12 ALS Bottle#: 31 Worklist Smp#: 133
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: LCS280-406000/2-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:49:41 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:45:30

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								M
331.8 > 286.8	0.866	1.045	-0.179	1.000	841979	11.3	765	M
* 2 13C3 HFPO-DA (IS)								M
331.8 > 286.8	0.866	1.045	-0.179		841979	10.0	765	M
1 Perfluoro(2-propoxypropanoic) acid								M
328.8 > 284.8	0.880	1.056	-0.176	1.000	849647	9.45	87.0	M

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 27-Feb-2018 07:49:44 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26144.d

Injection Date: 26-Feb-2018 15:45:12 Instrument ID: LC_LCMS7

Lims ID: LCS 280-406000/2-A

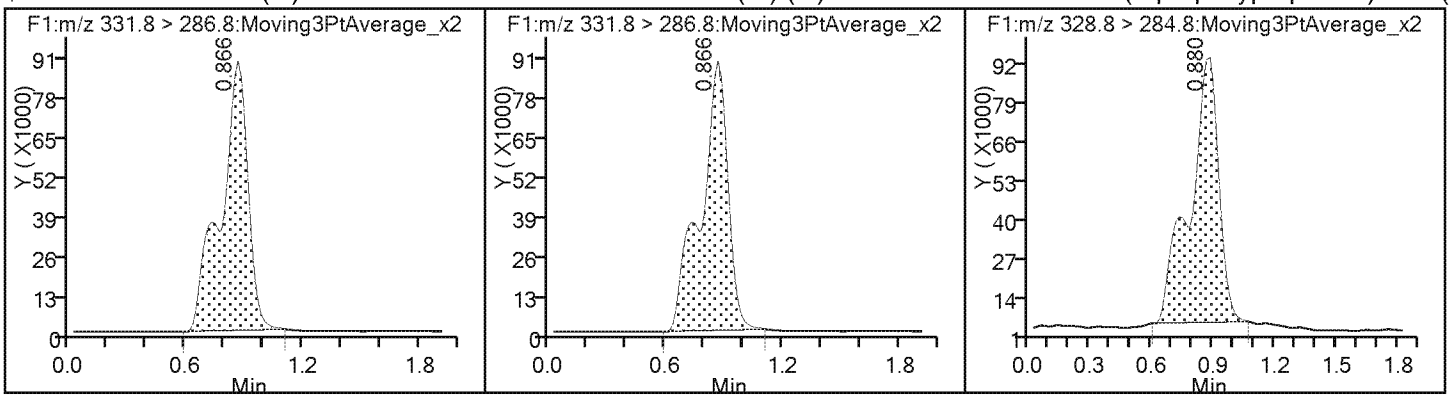
Client ID:

Operator ID: JBH ALS Bottle#: 31 Worklist Smp#: 133

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA (M) * 2 13C3 HFPO-DA (IS) (M) 1 Perfluoro(2-propoxypropanoic) acid (M)



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26144.d
Lims ID: LCS 280-406000/2-A
Client ID:
Sample Type: LCS
Inject. Date: 26-Feb-2018 15:45:12 ALS Bottle#: 31 Worklist Smp#: 133
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: LCS280-406000/2-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:49:41 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:45:30

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	11.3	112.78

Manual Integration/User Assign Peak Report

TestAmerica Denver

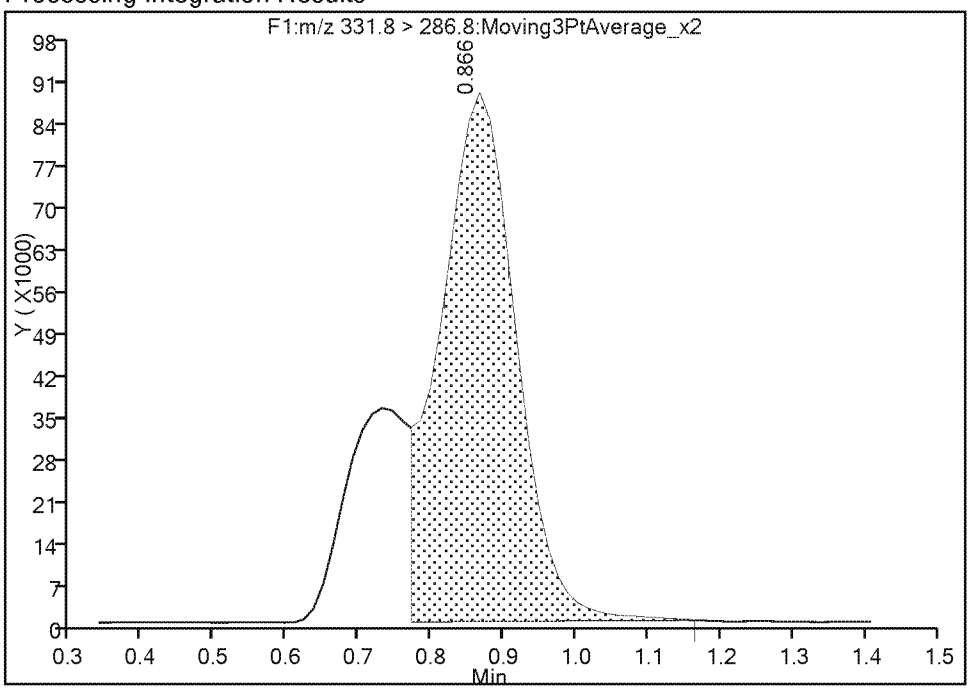
Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26144.d
Injection Date: 26-Feb-2018 15:45:12 Instrument ID: LC_LCMS7
Lims ID: LCS 280-406000/2-A
Client ID:
Operator ID: JBH ALS Bottle#: 31 Worklist Smp#: 133
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: HFPO Limit Group: LC - 8321A_HFPO_Du
Column: Detector F1:MRM

$ 3 13C3 HFPO-DA, CAS: STL02255

Signal: 1

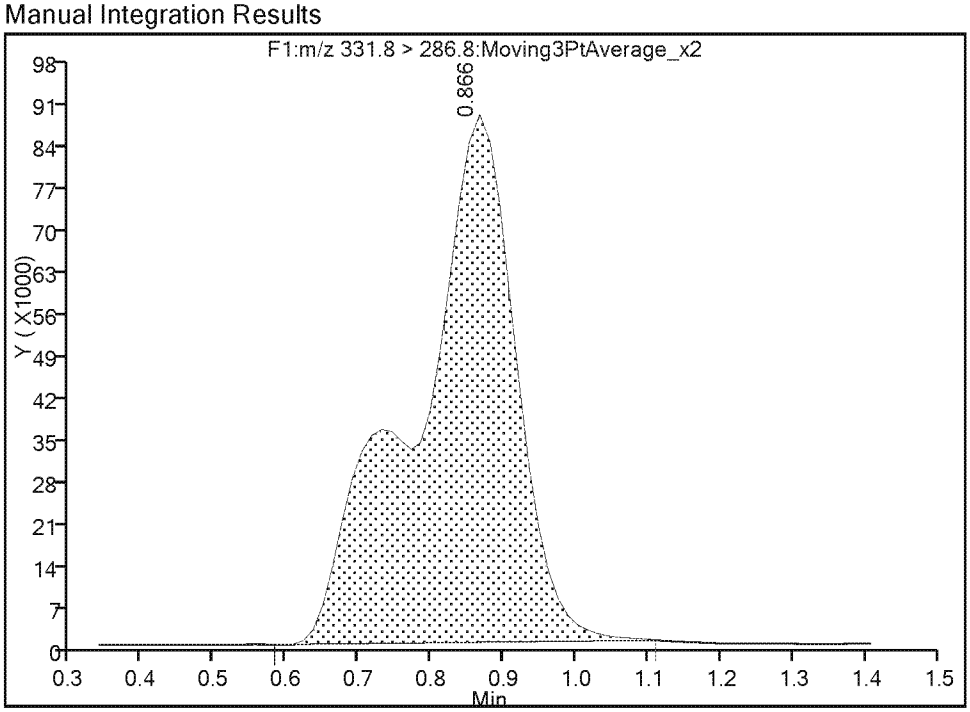
Processing Integration Results

RT: 0.87
Area: 638854
Amount: 8.556858
Amount Units: ug/l



Manual Integration Results

RT: 0.87
Area: 841979
Amount: 11.277530
Amount Units: ug/l



Reviewer: meyera, 27-Feb-2018 07:45:24
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

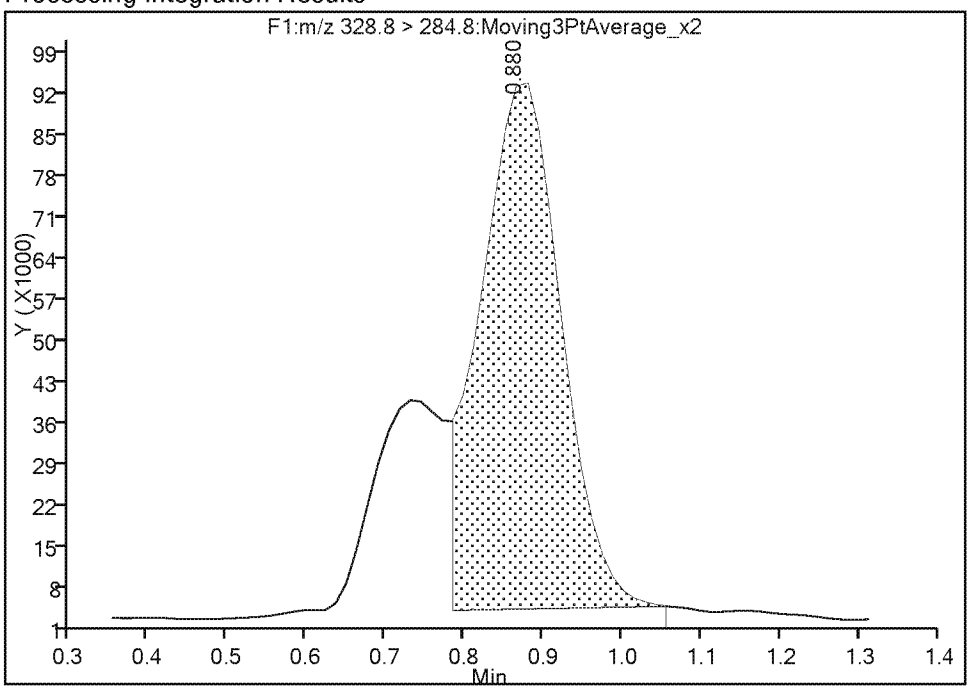
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26144.d				
Injection Date:	26-Feb-2018 15:45:12	Instrument ID:	LC_LCMS7		
Lims ID:	LCS 280-406000/2-A				
Client ID:					
Operator ID:	JBH	ALS Bottle#:	31	Worklist Smp#:	133
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		
Column:		Detector	F1:MRM		

1 Perfluoro(2-propoxypropanoic) acid, CAS: 13252-13-6

Signal: 1

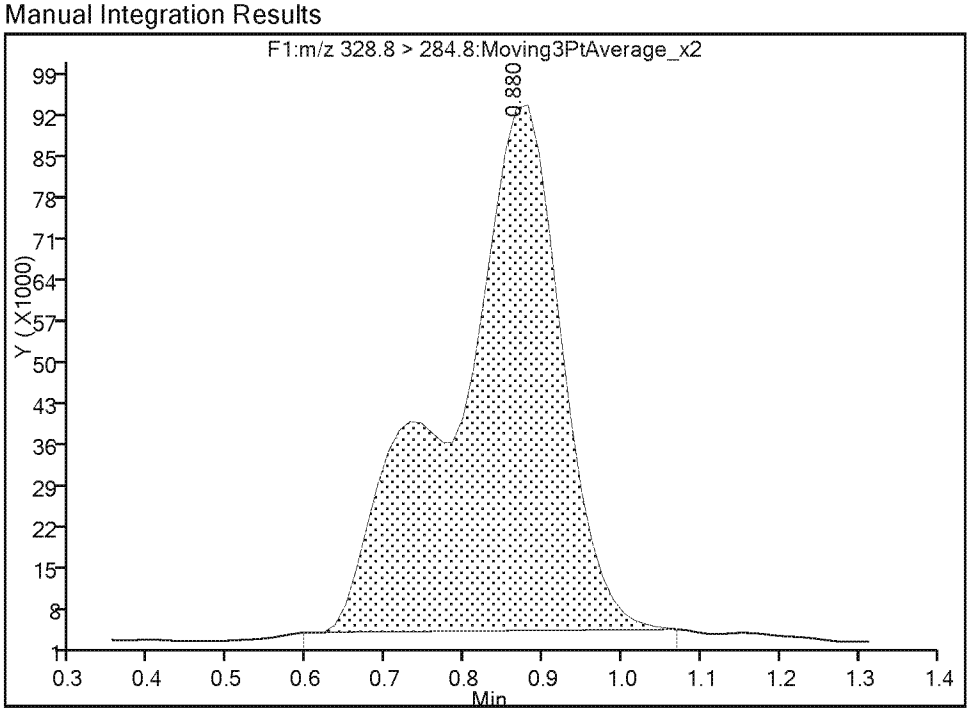
Processing Integration Results

RT: 0.88
Area: 627196
Amount: 6.968361
Amount Units: ug/l



Manual Integration Results

RT: 0.88
Area: 849647
Amount: 9.451913
Amount Units: ug/l



Reviewer: meyera, 27-Feb-2018 07:45:28

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-406019/2-A

Matrix: Water | Lab File ID: hfpo718B26088.d

Analysis Method: 8321A | Date Collected:

Extraction Method: 3535 | Date Extracted: 02/24/2018 20:22

Sample wt/vol: 250(mL) | Date Analyzed: 02/26/2018 12:41

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.171		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	118		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26088.d
Lims ID: LCS 280-406019/2-A
Client ID:
Sample Type: LCS
Inject. Date: 26-Feb-2018 12:41:47 ALS Bottle#: 19 Worklist Smp#: 78
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: LCS280-406019/2-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:26:58

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.893	1.045	-0.152	1.000	880110	11.8	1444	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.893	1.045	-0.152		880110	10.0	1444	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.893	1.056	-0.163	1.000	802678	8.54	166	

Report Date: 26-Feb-2018 13:46:29 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26088.d

Injection Date: 26-Feb-2018 12:41:47 Instrument ID: LC_LCMS7

Lims ID: LCS 280-406019/2-A

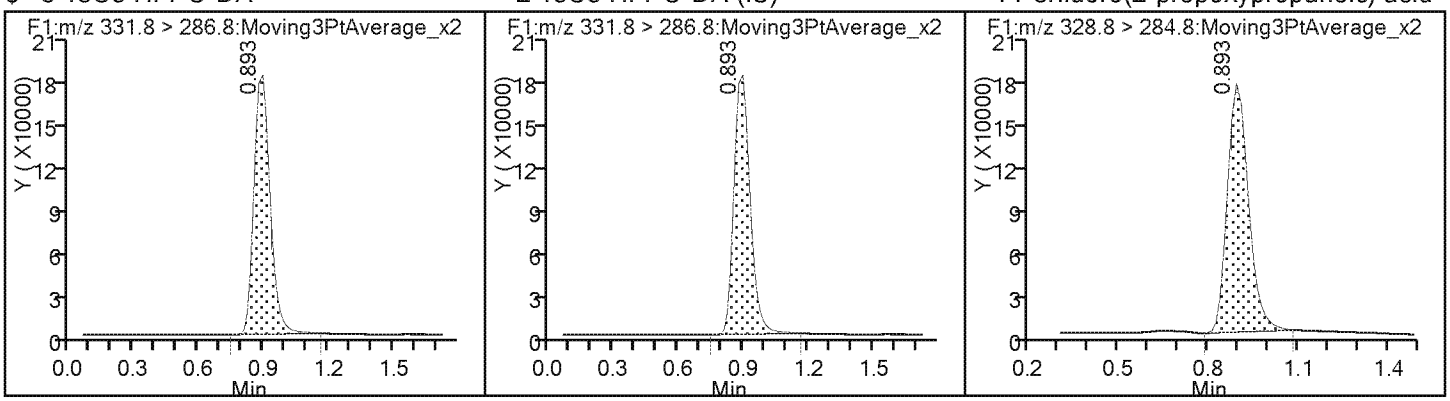
Client ID:

Operator ID: JBH ALS Bottle#: 19 Worklist Smp#: 78

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26088.d
Lims ID: LCS 280-406019/2-A
Client ID:
Sample Type: LCS
Inject. Date: 26-Feb-2018 12:41:47 ALS Bottle#: 19 Worklist Smp#: 78
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: LCS280-406019/2-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:26:58

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	11.8	117.88

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-406000/3-A

Matrix: Water | Lab File ID: hfpo718B26145.d

Analysis Method: 8321A | Date Collected:

Extraction Method: 3535 | Date Extracted: 02/23/2018 21:44

Sample wt/vol: 250(mL) | Date Analyzed: 02/26/2018 15:48

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406060 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.224		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	116		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26145.d
Lims ID: LCSD 280-406000/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 26-Feb-2018 15:48:29 ALS Bottle#: 32 Worklist Smp#: 134
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: LCSD280-406000/3-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:49:41 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:45:35

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.866	1.045	-0.179	1.000	866192	11.6	1225	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.866	1.045	-0.179		866192	10.0	1225	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.880	1.056	-0.176	1.000	1034607	11.2	166	

Report Date: 27-Feb-2018 07:49:45 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26145.d

Injection Date: 26-Feb-2018 15:48:29 Instrument ID: LC_LCMS7

Lims ID: LCSD 280-406000/3-A

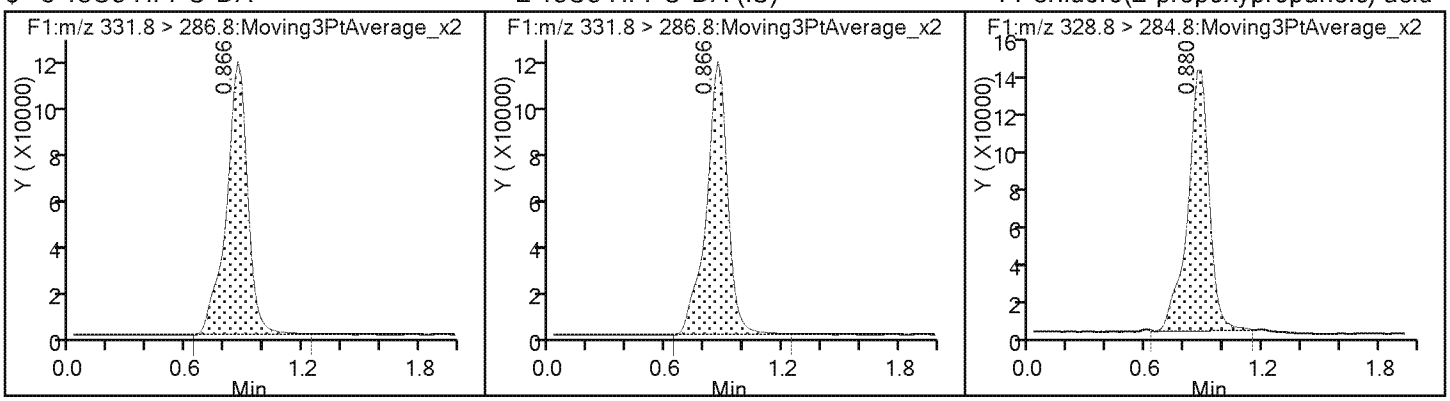
Client ID:

Operator ID: JBH ALS Bottle#: 32 Worklist Smp#: 134

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26145.d				
Lims ID:	LCSD 280-406000/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	26-Feb-2018 15:48:29	ALS Bottle#:	32	Worklist Smp#:	134
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD280-406000/3-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	27-Feb-2018 07:49:41	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK019				

First Level Reviewer: meyera Date: 27-Feb-2018 07:45:35

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	11.6	116.02

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-406019/3-A

Matrix: Water | Lab File ID: hfpo718B26089.d

Analysis Method: 8321A | Date Collected:

Extraction Method: 3535 | Date Extracted: 02/24/2018 20:22

Sample wt/vol: 250(mL) | Date Analyzed: 02/26/2018 12:45

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.180		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	113		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26089.d
Lims ID: LCSD 280-406019/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 26-Feb-2018 12:45:03 ALS Bottle#: 20 Worklist Smp#: 79
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: LCSD280-406019/3-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:00

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.880	1.045	-0.165	1.000	845126	11.3	1718	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.880	1.045	-0.165		845126	10.0	1718	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.880	1.056	-0.176	1.000	811000	8.99	140	

Report Date: 26-Feb-2018 13:46:31 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26089.d

Injection Date: 26-Feb-2018 12:45:03 Instrument ID: LC_LCMS7

Lims ID: LCSD 280-406019/3-A

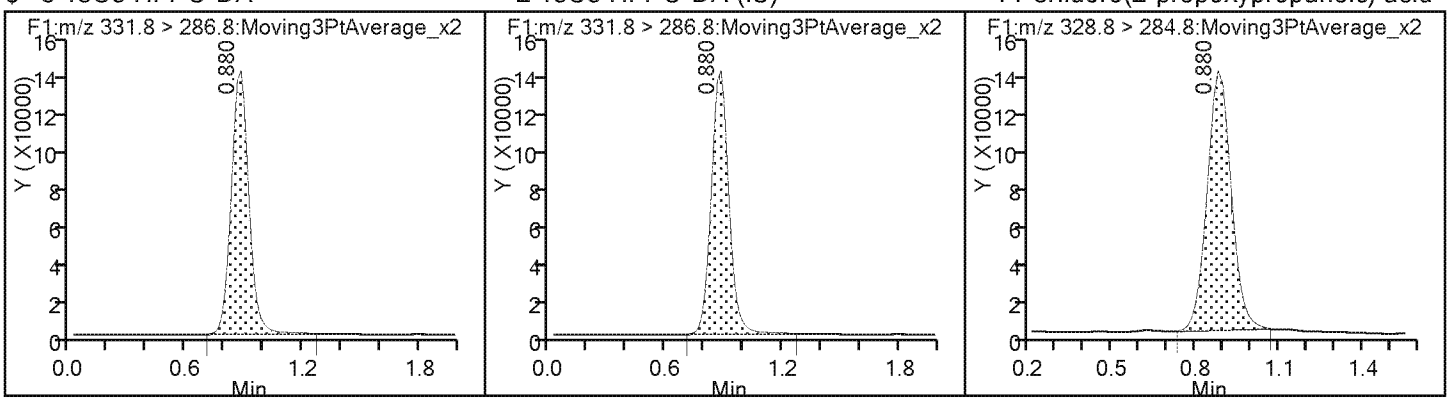
Client ID:

Operator ID: JBH ALS Bottle#: 20 Worklist Smp#: 79

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26089.d				
Lims ID:	LCSD 280-406019/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	26-Feb-2018 12:45:03	ALS Bottle#:	20	Worklist Smp#:	79
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD280-406019/3-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 13:46:25	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:00

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	11.3	113.20

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: | Lab Sample ID: LLCS 280-406000/4-A

Matrix: Water | Lab File ID: hfpo718B26146.d

Analysis Method: 8321A | Date Collected:

Extraction Method: 3535 | Date Extracted: 02/23/2018 21:44

Sample wt/vol: 250(mL) | Date Analyzed: 02/26/2018 15:51

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406060 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.0182		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	115		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26146.d
Lims ID: LLCS 280-406000/4-A
Client ID:
Sample Type: LLCS
Inject. Date: 26-Feb-2018 15:51:45 ALS Bottle#: 33 Worklist Smp#: 135
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: LLCS280-406000/4-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 27-Feb-2018 07:49:41 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK019

First Level Reviewer: meyera Date: 27-Feb-2018 07:45:48

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.866	1.045	-0.179	1.000	859723	11.5	1487	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.866	1.045	-0.179		859723	10.0	1487	
1 Perfluoro(2-propoxypropanoic) acid								M
328.8 > 284.8	0.880	1.056	-0.176	1.000	86404	0.9108	13.3	M

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 27-Feb-2018 07:49:46 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26146.d

Injection Date: 26-Feb-2018 15:51:45 Instrument ID: LC_LCMS7

Lims ID: LLCS 280-406000/4-A

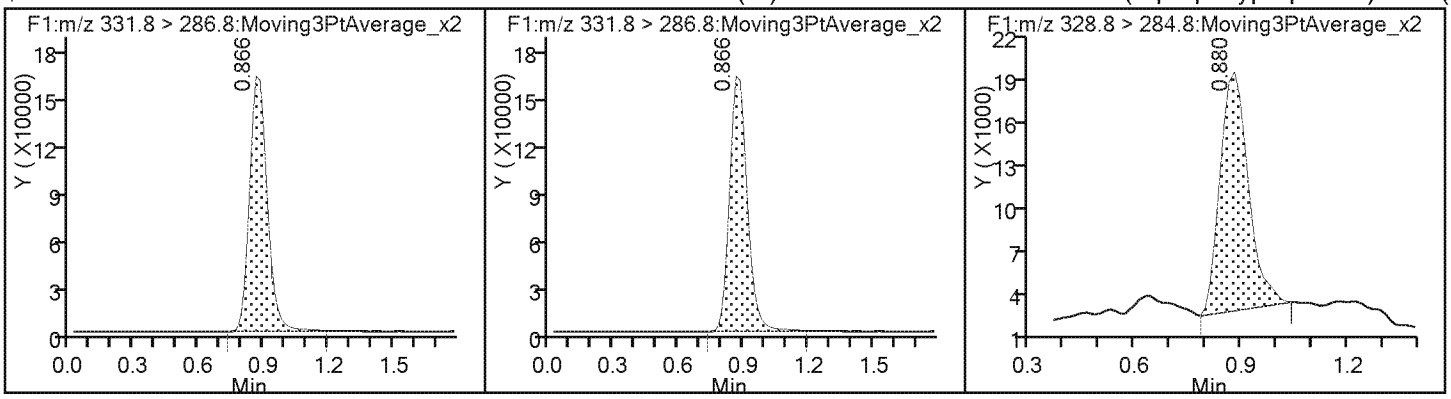
Client ID:

Operator ID: JBH ALS Bottle#: 33 Worklist Smp#: 135

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid (M)



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26146.d				
Lims ID:	LLCS 280-406000/4-A				
Client ID:					
Sample Type:	LLCS				
Inject. Date:	26-Feb-2018 15:51:45	ALS Bottle#:	33	Worklist Smp#:	135
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	LLCS280-406000/4-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	27-Feb-2018 07:49:41	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK019				

First Level Reviewer: meyera Date: 27-Feb-2018 07:45:48

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	11.5	115.15

Manual Integration/User Assign Peak Report

TestAmerica Denver

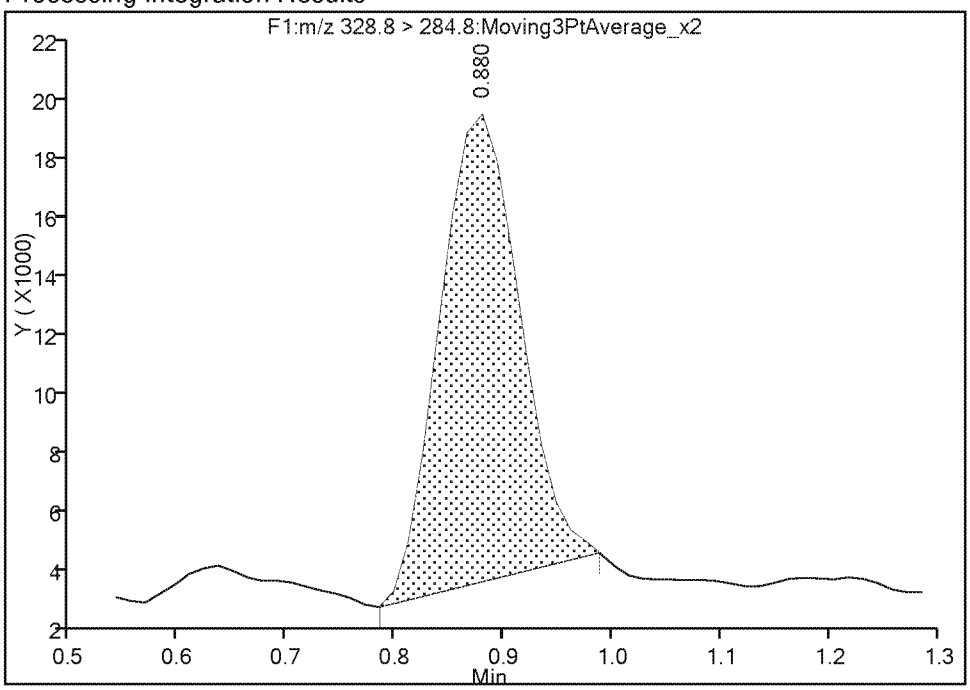
Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26146.d
Injection Date: 26-Feb-2018 15:51:45 Instrument ID: LC_LCMS7
Lims ID: LLCS 280-406000/4-A
Client ID:
Operator ID: JBH ALS Bottle#: 33 Worklist Smp#: 135
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: HFPO Limit Group: LC - 8321A_HFPO_Du
Column: Detector F1:MRM

1 Perfluoro(2-propoxypropanoic) acid, CAS: 13252-13-6

Signal: 1

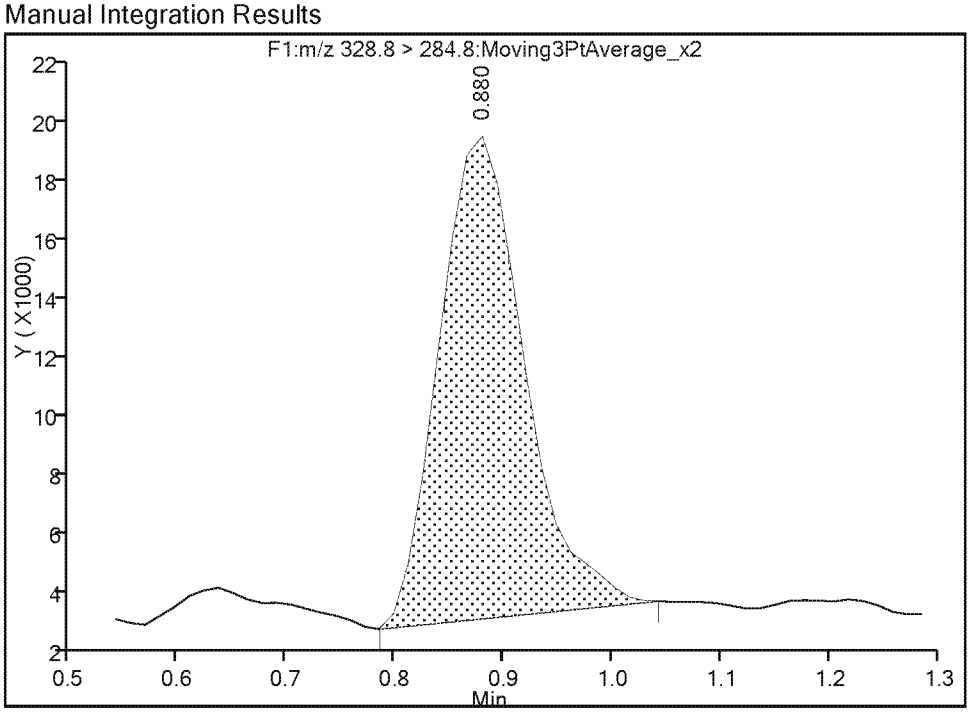
Processing Integration Results

RT: 0.88
Area: 78795
Amount: 0.827587
Amount Units: ug/l



Manual Integration Results

RT: 0.88
Area: 86404
Amount: 0.910784
Amount Units: ug/l



Reviewer: meyera, 27-Feb-2018 07:45:46
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: | Lab Sample ID: LLCS 280-406019/4-A

Matrix: Water | Lab File ID: hfpo718B26090.d

Analysis Method: 8321A | Date Collected:

Extraction Method: 3535 | Date Extracted: 02/24/2018 20:22

Sample wt/vol: 250(mL) | Date Analyzed: 02/26/2018 12:48

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.0197		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	116		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26090.d
Lims ID: LLCS 280-406019/4-A
Client ID:
Sample Type: LLCS
Inject. Date: 26-Feb-2018 12:48:19 ALS Bottle#: 21 Worklist Smp#: 80
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: LLCS280-406019/4-A
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:02

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.880	1.045	-0.165	1.000	864176	11.6	1528	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.880	1.045	-0.165		864176	10.0	1528	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.893	1.056	-0.163	1.000	93863	0.9871	16.0	

Report Date: 26-Feb-2018 13:46:33 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26090.d

Injection Date: 26-Feb-2018 12:48:19 Instrument ID: LC_LCMS7

Lims ID: LLCS 280-406019/4-A

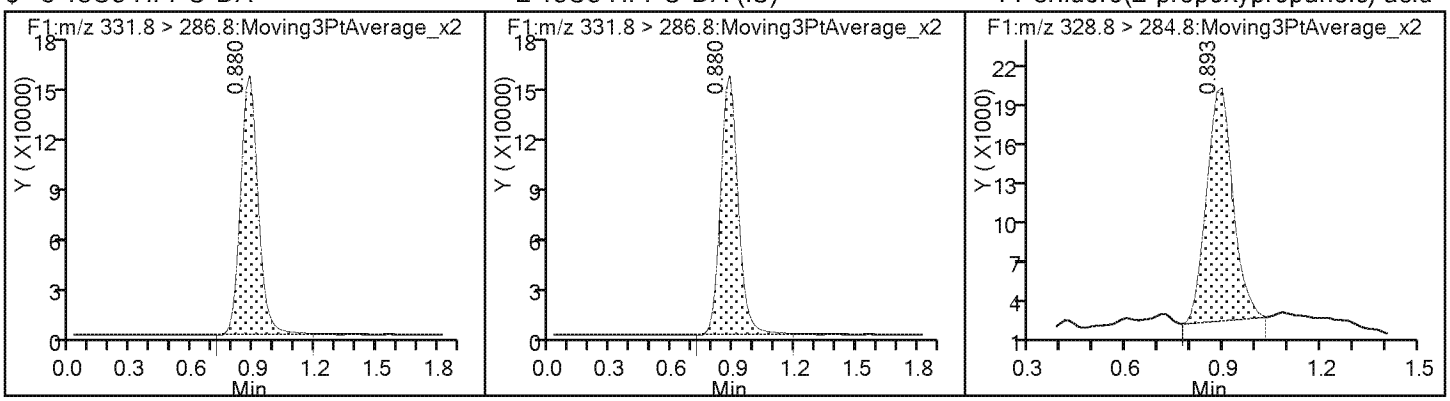
Client ID:

Operator ID: JBH ALS Bottle#: 21 Worklist Smp#: 80

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26090.d				
Lims ID:	LLCS 280-406019/4-A				
Client ID:					
Sample Type:	LLCS				
Inject. Date:	26-Feb-2018 12:48:19	ALS Bottle#:	21	Worklist Smp#:	80
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	LLCS280-406019/4-A				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 13:46:25	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:02

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	11.6	115.75

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: | Lab Sample ID: DLCK 280-404345/13

Matrix: Water | Lab File ID: hfpo718B08044.d

Analysis Method: 8321A | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 1(mL) | Date Analyzed: 02/08/2018 13:38

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 404345 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	<0.50		0.50	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	104		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08044.d
Lims ID: DLCK
Client ID:
Sample Type: DLCK
Inject. Date: 08-Feb-2018 13:38:01 ALS Bottle#: 2 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: DLCK
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:17 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:20:32

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	1.056	1.045	0.011	1.000	776147	10.4	1241	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	1.056	1.045	0.011		776147	10.0	1241	
1 Perfluoro(2-propoxypropanoic) acid								M
328.8 > 284.8	1.056	1.056	0.0	1.000	21424	0.2255	2.8	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

HFPO_CAL-1_00032 Amount Added: 1.00 Units: mL

Report Date: 08-Feb-2018 15:24:19 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08044.d

Injection Date: 08-Feb-2018 13:38:01 Instrument ID: LC_LCMS7

Lims ID: DLCK

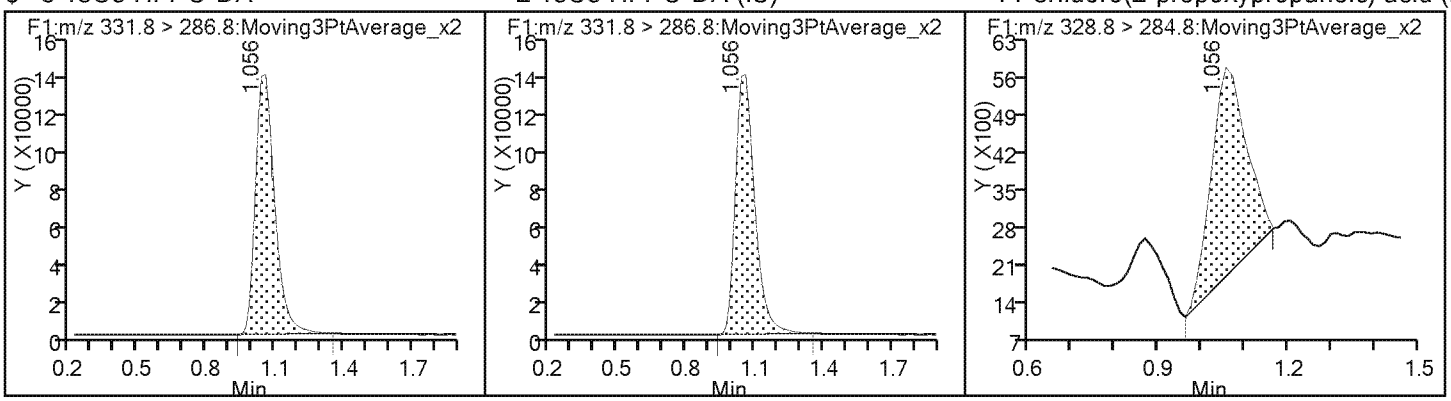
Client ID:

Operator ID: JBH ALS Bottle#: 2 Worklist Smp#: 13

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid (M)



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08044.d
Lims ID: DLCK
Client ID:
Sample Type: DLCK
Inject. Date: 08-Feb-2018 13:38:01 ALS Bottle#: 2 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: DLCK
Misc. Info.: HFPO18B08
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 08-Feb-2018 15:24:17 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: meyera Date: 08-Feb-2018 15:20:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	10.4	103.96

Manual Integration/User Assign Peak Report

TestAmerica Denver

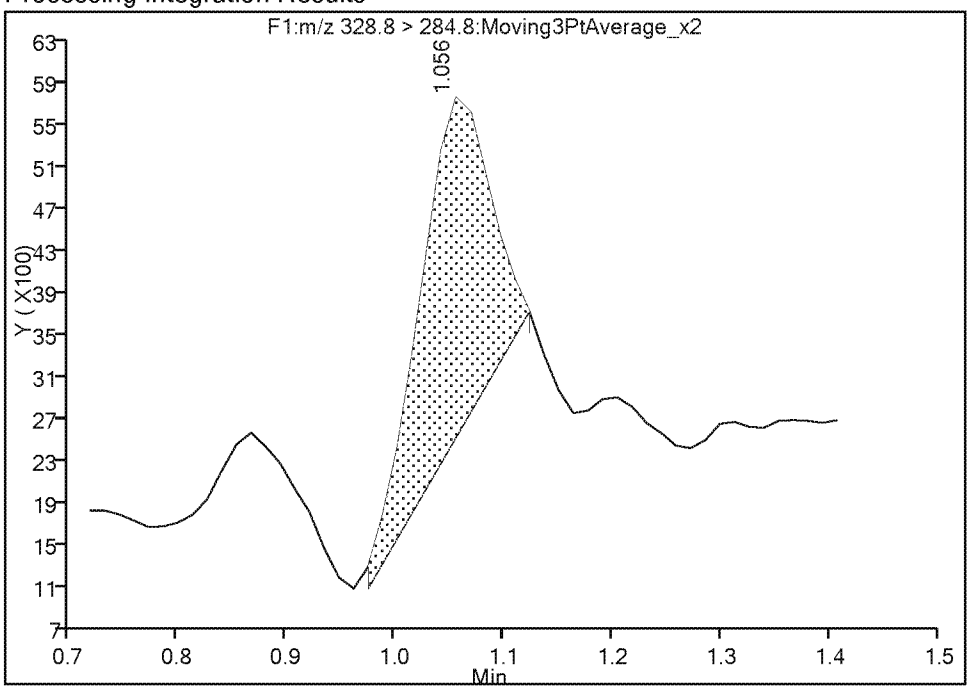
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08044.d				
Injection Date:	08-Feb-2018 13:38:01	Instrument ID:	LC_LCMS7		
Lims ID:	DLCK				
Client ID:					
Operator ID:	JBH	ALS Bottle#:	2	Worklist Smp#:	13
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	HFPO	Limit Group:	LC - 8321A_HFPO_Du		
Column:		Detector	F1:MRM		

1 Perfluoro(2-propoxypropanoic) acid, CAS: 13252-13-6

Signal: 1

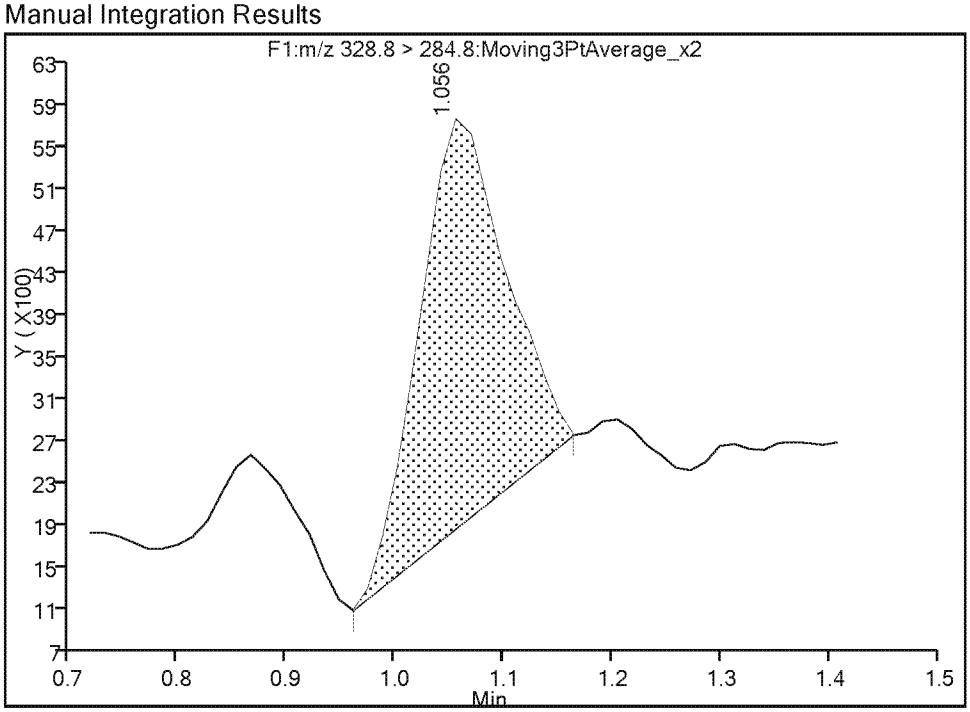
Processing Integration Results

RT: 1.06
Area: 14614
Amount: 0.143034
Amount Units: ug/l



Manual Integration Results

RT: 1.06
Area: 21424
Amount: 0.225513
Amount Units: ug/l



Reviewer: meyera, 08-Feb-2018 15:20:27

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418 MS | Lab Sample ID: 280-106426-1 MS

Matrix: Water | Lab File ID: hfpo718B26093.d

Analysis Method: 8321A | Date Collected: 02/14/2018 08:49

Extraction Method: 3535 | Date Extracted: 02/24/2018 20:22

Sample wt/vol: 261.1(mL) | Date Analyzed: 02/26/2018 12:58

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.266		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	105		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26093.d
Lims ID: 280-106426-D-1-A MS
Client ID: FAY-D-3980NIRAD-W1-1-021418
Sample Type: MS
Inject. Date: 26-Feb-2018 12:58:06 ALS Bottle#: 24 Worklist Smp#: 83
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-D-1-AMS
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:09

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.880	1.045	-0.165	1.000	787473	10.5	1226	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.880	1.045	-0.165		787473	10.0	1226	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.893	1.056	-0.163	1.000	1165807	13.9	105	

Report Date: 26-Feb-2018 13:46:42 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26093.d

Injection Date: 26-Feb-2018 12:58:06 Instrument ID: LC_LCMS7

Lims ID: 280-106426-D-1-A MS

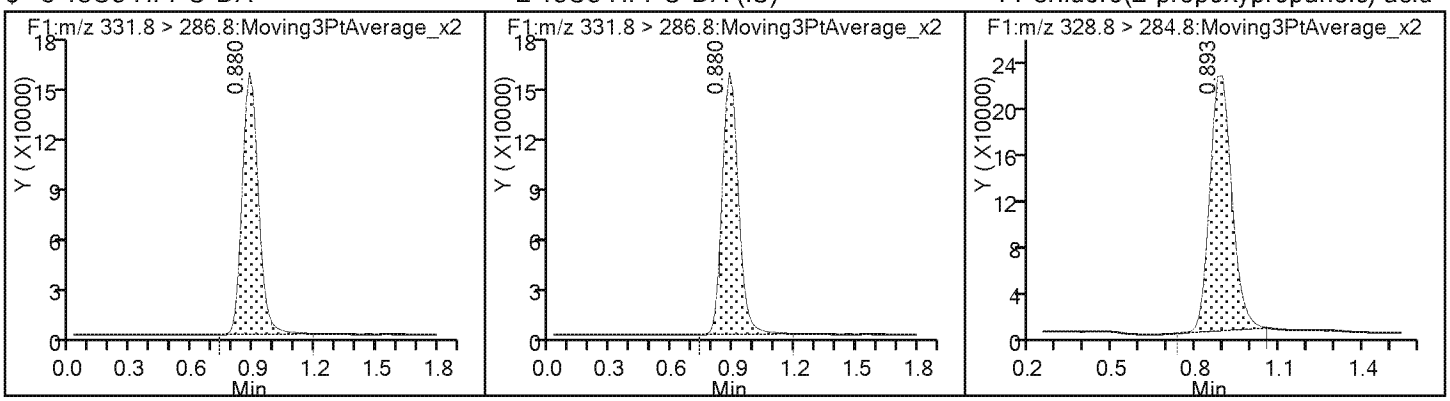
Client ID: FAY-D-3980NIRAD-W1-1-021418

Operator ID: JBH ALS Bottle#: 24 Worklist Smp#: 83

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26093.d				
Lims ID:	280-106426-D-1-A MS				
Client ID:	FAY-D-3980NIRAD-W1-1-021418				
Sample Type:	MS				
Inject. Date:	26-Feb-2018 12:58:06	ALS Bottle#:	24	Worklist Smp#:	83
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-D-1-AMS				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 13:46:25	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:09

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	10.5	105.47

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-106426-1

SDG No.:

Client Sample ID: FAY-D-3980NIRAD-W1-1-021418 DU | Lab Sample ID: 280-106426-1 DU

Matrix: Water | Lab File ID: hfpo718B26092.d

Analysis Method: 8321A | Date Collected: 02/14/2018 08:49

Extraction Method: 3535 | Date Extracted: 02/24/2018 20:22

Sample wt/vol: 259(mL) | Date Analyzed: 02/26/2018 12:54

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: Synergi Hydro ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 406058 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
13252-13-6	HFPO-DA	0.0628		0.010	

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	113		50-200

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26092.d
Lims ID: 280-106426-E-1-A DU
Client ID: FAY-D-3980NIRAD-W1-1-021418
Sample Type: DU
Inject. Date: 26-Feb-2018 12:54:50 ALS Bottle#: 23 Worklist Smp#: 82
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-106426-E-1-ADU
Misc. Info.: HFPO18B26
Operator ID: JBH Instrument ID: LC_LCMS7

Method: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m
Limit Group: LC - 8321A_HFPO_Du
Last Update: 26-Feb-2018 13:46:25 Calib Date: 08-Feb-2018 13:31:32
Integrator: Picker
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d

Column 1 : Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:07

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	S/N	Flags
$ 3 13C3 HFPO-DA								
331.8 > 286.8	0.880	1.045	-0.165	1.000	843403	11.3	1257	
* 2 13C3 HFPO-DA (IS)								
331.8 > 286.8	0.880	1.045	-0.165		843403	10.0	1257	
1 Perfluoro(2-propoxypropanoic) acid								
328.8 > 284.8	0.880	1.056	-0.176	1.000	294744	3.25	24.0	

Report Date: 26-Feb-2018 13:46:39 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26092.d

Injection Date: 26-Feb-2018 12:54:50 Instrument ID: LC_LCMS7

Lims ID: 280-106426-E-1-A DU

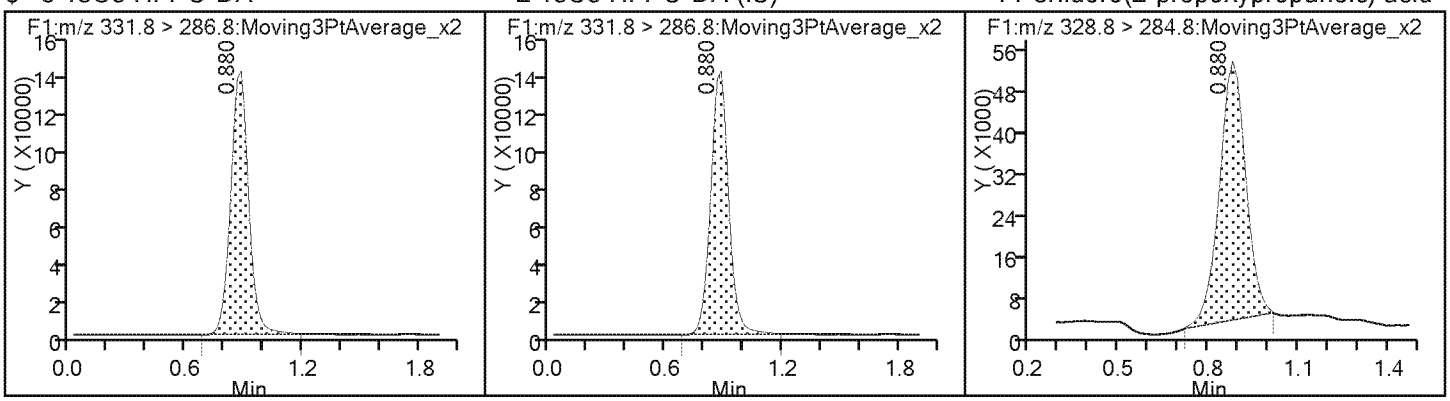
Client ID: FAY-D-3980NIRAD-W1-1-021418

Operator ID: JBH ALS Bottle#: 23 Worklist Smp#: 82

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: HFPO Limit Group: LC - 8321A_HFPO_Du

$ 3 13C3 HFPO-DA * 2 13C3 HFPO-DA (IS) 1 Perfluoro(2-propoxypropanoic) acid



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\hfpo718B26092.d				
Lims ID:	280-106426-E-1-A DU				
Client ID:	FAY-D-3980NIRAD-W1-1-021418				
Sample Type:	DU				
Inject. Date:	26-Feb-2018 12:54:50	ALS Bottle#:	23	Worklist Smp#:	82
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-106426-E-1-ADU				
Misc. Info.:	HFPO18B26				
Operator ID:	JBH	Instrument ID:	LC_LCMS7		
Method:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180226-67520.b\HFPO.m				
Limit Group:	LC - 8321A_HFPO_Du				
Last Update:	26-Feb-2018 13:46:25	Calib Date:	08-Feb-2018 13:31:32		
Integrator:	Picker				
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\LC_LCMS7\20180208-67079.b\hfpo718B08042.d				
Column 1 :			Det: F1:MRM		
Process Host:	XAWRK022				

First Level Reviewer: meyera Date: 26-Feb-2018 13:27:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 13C3 HFPO-DA	10.0	11.3	112.97

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Instrument ID: LC_LCMS7 Start Date: 02/08/2018 13:05

Analysis Batch Number: 404345 End Date: 02/08/2018 13:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD001 280-404345/3 IC		02/08/2018 13:05	1	hfpo718B08034.d	Synergi Hydro
STD002 280-404345/4 IC		02/08/2018 13:08	1	hfpo718B08035.d	Synergi Hydro
STD003 280-404345/5 IC		02/08/2018 13:12	1	hfpo718B08036.d	Synergi Hydro
STD004 280-404345/6 IC		02/08/2018 13:15	1	hfpo718B08037.d	Synergi Hydro
STD005 280-404345/7 IC		02/08/2018 13:18	1	hfpo718B08038.d	Synergi Hydro
STD006 280-404345/8 IC		02/08/2018 13:21	1	hfpo718B08039.d	Synergi Hydro
STD007 280-404345/9 IC		02/08/2018 13:25	1	hfpo718B08040.d	Synergi Hydro
STD008 280-404345/10 IC		02/08/2018 13:28	1	hfpo718B08041.d	Synergi Hydro
STD009 280-404345/11 IC		02/08/2018 13:31	1	hfpo718B08042.d	Synergi Hydro
ICB 280-404345/12		02/08/2018 13:34	1	hfpo718B08043.d	Synergi Hydro
DLCK 280-404345/13		02/08/2018 13:38	1	hfpo718B08044.d	Synergi Hydro
ICV 280-404345/14		02/08/2018 13:41	1	hfpo718B08045.d	Synergi Hydro

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Instrument ID: LC_LCMS7 Start Date: 02/26/2018 12:35

Analysis Batch Number: 406058 End Date: 02/26/2018 14:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-406058/76		02/26/2018 12:35	1	hfpo718B26086.d	Synergi Hydro
MB 280-406019/1-A		02/26/2018 12:38	1	hfpo718B26087.d	Synergi Hydro
LCS 280-406019/2-A		02/26/2018 12:41	1	hfpo718B26088.d	Synergi Hydro
LCSD 280-406019/3-A		02/26/2018 12:45	1	hfpo718B26089.d	Synergi Hydro
LLCS 280-406019/4-A		02/26/2018 12:48	1	hfpo718B26090.d	Synergi Hydro
280-106426-1		02/26/2018 12:51	1	hfpo718B26091.d	Synergi Hydro
280-106426-1 DU		02/26/2018 12:54	1	hfpo718B26092.d	Synergi Hydro
280-106426-1 MS		02/26/2018 12:58	1	hfpo718B26093.d	Synergi Hydro
280-106426-2		02/26/2018 13:01	1	hfpo718B26094.d	Synergi Hydro
280-106426-3		02/26/2018 13:04	1	hfpo718B26095.d	Synergi Hydro
280-106426-4		02/26/2018 13:07	1	hfpo718B26096.d	Synergi Hydro
CCV 280-406058/87		02/26/2018 13:11	1	hfpo718B26097.d	Synergi Hydro
280-106426-11		02/26/2018 13:14	1	hfpo718B26098.d	Synergi Hydro
280-106426-12		02/26/2018 13:17	1	hfpo718B26099.d	Synergi Hydro
280-106426-13		02/26/2018 13:20	1	hfpo718B26100.d	Synergi Hydro
280-106426-14		02/26/2018 13:24	1	hfpo718B26101.d	Synergi Hydro
ZZZZZ		02/26/2018 13:27	1		Synergi Hydro
ZZZZZ		02/26/2018 13:30	1		Synergi Hydro
ZZZZZ		02/26/2018 13:34	1		Synergi Hydro
ZZZZZ		02/26/2018 13:37	1		Synergi Hydro
ZZZZZ		02/26/2018 13:40	1		Synergi Hydro
ZZZZZ		02/26/2018 13:44	1		Synergi Hydro
CCV 280-406058/98		02/26/2018 13:47	1	hfpo718B26108.d	Synergi Hydro
ZZZZZ		02/26/2018 13:50	1		Synergi Hydro
ZZZZZ		02/26/2018 13:54	1		Synergi Hydro
ZZZZZ		02/26/2018 13:57	1		Synergi Hydro
ZZZZZ		02/26/2018 14:00	1		Synergi Hydro
ZZZZZ		02/26/2018 14:04	1		Synergi Hydro
ZZZZZ		02/26/2018 14:07	1		Synergi Hydro
CCV 280-406058/105		02/26/2018 14:10	1		Synergi Hydro

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Instrument ID: LC_LCMS7 Start Date: 02/26/2018 15:38

Analysis Batch Number: 406060 End Date: 02/26/2018 17:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-406060/131		02/26/2018 15:38	1	hfpo718B26142.d	Synergi Hydro
MB 280-406000/1-A		02/26/2018 15:41	1	hfpo718B26143.d	Synergi Hydro
LCS 280-406000/2-A		02/26/2018 15:45	1	hfpo718B26144.d	Synergi Hydro
LCSD 280-406000/3-A		02/26/2018 15:48	1	hfpo718B26145.d	Synergi Hydro
LLCS 280-406000/4-A		02/26/2018 15:51	1	hfpo718B26146.d	Synergi Hydro
ZZZZZ		02/26/2018 15:55	1		Synergi Hydro
ZZZZZ		02/26/2018 15:58	1		Synergi Hydro
ZZZZZ		02/26/2018 16:01	1		Synergi Hydro
ZZZZZ		02/26/2018 16:04	1		Synergi Hydro
ZZZZZ		02/26/2018 16:08	1		Synergi Hydro
ZZZZZ		02/26/2018 16:11	1		Synergi Hydro
CCV 280-406060/142		02/26/2018 16:14	1	hfpo718B26153.d	Synergi Hydro
ZZZZZ		02/26/2018 16:17	1		Synergi Hydro
ZZZZZ		02/26/2018 16:21	1		Synergi Hydro
ZZZZZ		02/26/2018 16:24	1		Synergi Hydro
ZZZZZ		02/26/2018 16:27	1		Synergi Hydro
ZZZZZ		02/26/2018 16:31	1		Synergi Hydro
ZZZZZ		02/26/2018 16:34	1		Synergi Hydro
ZZZZZ		02/26/2018 16:37	1		Synergi Hydro
ZZZZZ		02/26/2018 16:40	1		Synergi Hydro
ZZZZZ		02/26/2018 16:44	1		Synergi Hydro
280-106426-5		02/26/2018 16:47	1	hfpo718B26163.d	Synergi Hydro
CCV 280-406060/153		02/26/2018 16:50	1	hfpo718B26164.d	Synergi Hydro
280-106426-6		02/26/2018 16:53	1	hfpo718B26165.d	Synergi Hydro
280-106426-7		02/26/2018 16:57	1	hfpo718B26166.d	Synergi Hydro
280-106426-8		02/26/2018 17:00	1	hfpo718B26167.d	Synergi Hydro
280-106426-9		02/26/2018 17:03	1	hfpo718B26168.d	Synergi Hydro
280-106426-10		02/26/2018 17:06	1	hfpo718B26169.d	Synergi Hydro
ZZZZZ		02/26/2018 17:10	1		Synergi Hydro
CCV 280-406060/160		02/26/2018 17:13	1	hfpo718B26171.d	Synergi Hydro

8321A

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Batch Number: 406000 Batch Start Date: 02/23/18 21:44 Batch Analyst: Cokley, Cheyana D

Batch Method: 3535 Batch End Date: 02/23/18 23:57

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	HFPO I.S. 00008	HFPO Spike 00004
MB 280-406000/1		3535, 8321A				250 mL	5 mL	0.1 mL	
LCS 280-406000/2		3535, 8321A				250 mL	5 mL	0.1 mL	0.1 mL
LCSD 280-406000/3		3535, 8321A				250 mL	5 mL	0.1 mL	0.1 mL
LLCS 280-406000/4		3535, 8321A				250 mL	5 mL	0.1 mL	0.01 mL
280-106426-A-5	FAY-D-6520TABOR-W1-1-021418	3535, 8321A	T	294.3 g	28.9 g	265.4 mL	5 mL	0.1 mL	
280-106426-C-6	FAY-D-6719TABOR-W1-1-021418	3535, 8321A	T	293.3 g	29.3 g	264 mL	5 mL	0.1 mL	
280-106426-D-7	FAY-D-FB-021418	3535, 8321A	T	285.7 g	27.8 g	257.9 mL	5 mL	0.1 mL	
280-106426-A-8	FAY-D-5500RNGTL-W1-1-021418	3535, 8321A	T	298.7 g	29.1 g	269.6 mL	5 mL	0.1 mL	
280-106426-B-9	FAY-D-71LAURA-W1-1-021418	3535, 8321A	T	305.7 g	28.1 g	277.6 mL	5 mL	0.1 mL	
280-106426-C-10	FAY-D-3995NIRAD-W1-1-021418	3535, 8321A	T	289.5 g	28.1 g	261.4 mL	5 mL	0.1 mL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Batch Number: 406000 Batch Start Date: 02/23/18 21:44 Batch Analyst: Cokley, Cheyana D

Batch Method: 3535 Batch End Date: 02/23/18 23:57

Batch Notes	
Acid ID	2% Formic Aci_00145
Acid Name	2% Formic Acid
Balance ID	24350888
Batch Comment	Reviewer:CDC
First End time	2. 23 .18 2244
H2O ID	HPLC_Water_00861/860
Pipette ID	P, SPE-1+ syringe
Reagent ID	10% NH4OH
Reagent Lot Number	10% NH4OH_00120
Solvent Lot #	Methanol_00193
Solvent Name	Methanol
SOP Number	DV-OP-0019
SPE Cartridge Type	STRATA-X-AW (8B S038 FCH)
Solid Phase Extraction Disk ID	S308-0079
First Start time	2.23.18 2151

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Batch Number: 406019 Batch Start Date: 02/24/18 20:22 Batch Analyst: Cokley, Cheyana D

Batch Method: 3535 Batch End Date: 02/24/18 22:33

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	HFPO I.S. 00008	HFPO Spike 00004
MB 280-406019/1		3535, 8321A				250 mL	5 mL	0.1 mL	
LCS 280-406019/2		3535, 8321A				250 mL	5 mL	0.1 mL	0.1 mL
LCSD 280-406019/3		3535, 8321A				250 mL	5 mL	0.1 mL	0.1 mL
LLCS 280-406019/4		3535, 8321A				250 mL	5 mL	0.1 mL	0.01 mL
280-106426-C-1	FAY-D-3980NIRAD-W1-1-021418	3535, 8321A	T	288.9 g	28.8 g	260.1 mL	5 mL	0.1 mL	
280-106426-E-1 DU	FAY-D-3980NIRAD-W1-1-021418	3535, 8321A	T	287.0 g	28.0 g	259 mL	5 mL	0.1 mL	
280-106426-D-1 MS	FAY-D-3980NIRAD-W1-1-021418	3535, 8321A	T	289.9 g	28.8 g	261.1 mL	5 mL	0.1 mL	0.1 mL
280-106426-C-2	FAY-D-3980NIRAD-W1-1-021418-D	3535, 8321A	T	287.0 g	27.7 g	259.3 mL	5 mL	0.1 mL	
280-106426-A-3	FAY-D-5533MRSHR-W1-1-021418	3535, 8321A	T	287.5 g	27.7 g	259.8 mL	5 mL	0.1 mL	
280-106426-C-4	FAY-D-5617MATTH-W1-1-021418	3535, 8321A	T	290.1 g	28.6 g	261.5 mL	5 mL	0.1 mL	
280-106426-D-11	FAY-D-3995NIRAD-W1-2-021418	3535, 8321A	T	295.4 g	29.1 g	266.3 mL	5 mL	0.1 mL	
280-106426-D-12	FAY-D-5375MRSHR-W1-1-021418	3535, 8321A	T	278.9 g	28.9 g	250 mL	5 mL	0.1 mL	
280-106426-D-13	FAY-D-4013NIRAD-W1-1-021418	3535, 8321A	T	277.0 g	27.5 g	249.5 mL	5 mL	0.1 mL	
280-106426-C-14	FAY-D-4013NIRAD-W1-2-021418	3535, 8321A	T	295.0 g	27.8 g	267.2 mL	5 mL	0.1 mL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-106426-1

SDG No.:

Batch Number: 406019 Batch Start Date: 02/24/18 20:22 Batch Analyst: Cokley, Cheyana D

Batch Method: 3535 Batch End Date: 02/24/18 22:33

Batch Notes	
Acid ID	2% Formic Aci_00145
Acid Name	2% Formic Acid
Balance ID	24350888
Batch Comment	Reviewer:CDC
First End time	2.24.18@2114
H2O ID	HPLC_Water_00860
Pipette ID	P, SPE-1 + syringe
Reagent ID	10% NH4OH
Reagent Lot Number	10% NH4OH_00120
Solvent Lot #	Methanol_00193
Solvent Name	Methanol
SOP Number	DV-OP-0019
SPE Cartridge Type	STRATA-X-AW (8B S038 FCH)
Solid Phase Extraction Disk ID	S308-0079
First Start time	2.24.18@2028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Reagent ID: HFPO_CAL-5_00082

Description:	level5	Expiration Date:	03/09/2018
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	LCMS	Prepared By:	Meyer, Andrew GC
Reagent Volume:	1.000 mL	Solvent:	80:20 Methanol : H2O
Creation Date:	02/23/2018	Solvent Lot:	00018
Open Date:			
Container(s):	4976870		
Comment:	level-5		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
13C3 HFPO-DA	HFPO I.S._00009	02/20/2019	0.50000	ug/mL	10.00000	ug/L
13C3 HFPO-DA (IS)	HFPO I.S._00009	02/20/2019	0.50000	ug/mL	10.00000	ug/L
Perfluoro(2-propoxypropanoic) acid	HFPO Spike_00004	10/30/2018	0.50000	ug/mL	5.00000	ug/L

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
HFPO I.S._00009	Internal Standard for HFPO 0.5ug/ml		02/20/19				20.00000	uL
HFPO Spike_00004	HFPO LCS/Calibration Spike 0.5ug/ml		10/30/18				10.00000	uL

Primary
02/23/18

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Reagent ID: HFPO_CAL-6_00082

Description:	level6	Expiration Date:	03/09/2018
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	LCMS	Prepared By:	Meyer, Andrew GC
Reagent Volume:	1.000 mL	Solvent:	80:20 Methanol : H2O
Creation Date:	02/23/2018	Solvent Lot:	00016
Open Date:			
Container(s):	4975871		
Comment:	level-6		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
13C3 HFPO-DA	HFPO I.S._00009	02/20/2019	0.50000	ug/mL	10.00000	ug/L
13C3 HFPO-DA (IS)	HFPO I.S._00009	02/20/2019	0.50000	ug/mL	10.00000	ug/L
Perfluoro(2-propoxypropanoic) acid	HFPO Spike_00004	10/30/2018	0.50000	ug/mL	10.00000	ug/L

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
HFPO I.S._00009	Internal Standard for HFPO 0.5ug/ml		02/20/19				20.00000	uL
HFPO Spike_00004	HFPO LCS/Calibration Spike 0.5ug/ml		10/30/18				20.00000	uL

02/23/2018 10:03

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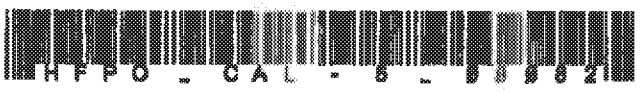
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



Reagent ID: HFPO_CAL-5_00082

Description:	level5	Expiration Date:	03/09/2018
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	LCMS	Prepared By:	Meyer, Andrew GC
Reagent Volume:	1.000 mL	Solvent:	80:20 Methanol : H2O
Creation Date:	02/23/2018	Solvent Lot:	00018
Open Date:			
Container(s):	4976870		
Comment:	level-5		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
13C3 HFPO-DA	HFPO I.S._00009	02/20/2019	0.50000	ug/mL	10.00000	ug/L
13C3 HFPO-DA (IS)	HFPO I.S._00009	02/20/2019	0.50000	ug/mL	10.00000	ug/L
Perfluoro(2-propoxypropanoic) acid	HFPO Spike_00004	10/30/2018	0.50000	ug/mL	5.00000	ug/L

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
HFPO I.S._00009	Internal Standard for HFPO 0.5ug/ml		02/20/19				20.00000	uL
HFPO Spike_00004	HFPO LCS/Calibration Spike 0.5ug/ml		10/30/18				10.00000	uL

Andrew
2/23/18

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Reagent ID: HFPO_CAL-6_00082

Description: level6
No. of Bottles: 1
Storage Location: LCMS
Reagent Volume: 1.000 mL
Creation Date: 02/23/2018
Open Date:
Container(s): 4975671
Comment: level-6

Expiration Date: 03/09/2018
Laboratory: TestAmerica Denver
Prepared By: Meyer, Andrew GC
Solvent: 80:20 Methanol : H2O
Solvent Lot: 00016

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
13C3 HFPO-DA	HFPO I.S._00009	02/20/2019	0.50000	ug/mL	10.00000	ug/L
13C3 HFPO-DA (IS)	HFPO I.S._00009	02/20/2019	0.50000	ug/mL	10.00000	ug/L
Perfluoro(2-propoxypropanoic) acid	HFPO Spike_00004	10/30/2018	0.50000	ug/mL	10.00000	ug/L

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
HFPO I.S._00009	Internal Standard for HFPO 0.5ug/ml		02/20/19				20.00000	uL
HFPO Spike_00004	HFPO LCS/Calibration Spike 0.5ug/ml		10/30/18				20.00000	uL

dvalgom
2/23/18

02/23/2018 10:03

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Shipping and Receiving Documents

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: RH, CB, LM	Lab PM: Johnston, Michelle	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Michael Aucoin	Phone: 704-600-5746	E-Mail: michelle.johnston@testamericainc.com		Page: Page ____ of ____
Company: The Chemours Company FC, LLC				Job #:

Address: c/o AECOM 4051 Ogletown Road, Suite 300	Due Date Requested:
City: Newark	TAT Requested (days): 10 Business Days
State, Zip: DE, 19713	
Phone: 302.781.5873	PO #: LBID-67048/84201000-2231QS1000
Email: michael.aucoin@aecom.com	WO #:
Project Name: FAY-2018 Residential Sampling	Project #: 28016904
Site:	SSOW#:

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify); Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	HPPO-DA- LC/MS/MS	Total Number of Containers	Special Instructions/Note:
Preservation Code:					X	X	N		
FAY-D-398DNIRAD-WI-1-021418	2/14/18	0844	G	W	N	N	X	4	Hold all
FAY-D-398DNIRAD-WI-1-021418-MS	2/14/18	0844	G	W	N	N	X	4	remaining
FAY-D-398DNIRAD-WI-1-021418-REP	2/14/18	0844	G	W	N	N	X	4	volumes
FAY-D-398DNIRAD-WI-1-021418-D	2/14/18	0849	G	W	N	N	X	4	as retains.
FAY-D-5533MRSHR-WI-1-021418	2/14/18	0914	G	W	N	N	X	4	
FAY-D-5617MATTY-WI-1-021418	2/14/18	1029	G	W	N	N	X	4	
FAY-D-6520TABOR-WI-1-021418	02/14/18	1248	G	W	N	N	X	4	
FAY-D-6719TABOR-WI-1-021418	2/14/18	1642	G	W	N	N	X	4	

280-106428 Chain of Custody

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Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Level IV

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	2/14/18 1700	parsons	[signature]	2/15/18 0930	TA-DEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.7, 3.9°C +0.1 ID #5 Transferred BB 2/15/18

ED_002011_00000088-00267

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: TP AM BB	Lab PM: Johnston, Michelle	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Michael Aucoin	Phone: 704-600-5746	E-Mail: michelle.johnston@testamericainc.com		Page: Page ____ of ____
Company: The Chemours Company FC, LLC				Job #:

Address: c/o AECOM 4051 Ogletown Road, Suite 300	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Newark	TAT Requested (days): 10 Business Days		A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify)
State, Zip: DE, 19713			
Phone: 302.781.5873	PO #: LBIO-67048/84201000-2231QS1000		
Email: michael.aucoin@aecom.com	WO #:		Other:
Project Name: FAY-2018 Residential Sampling	Project #: 28016904		
Site:	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	HPPO-DA-LC/MS/MS	Total Number of Containers	Special Instructions/Note:
			Preservation Code:		X	X	X		
FAY-D-FB-021418	021418	0715	G	W	N	N	X	3	Hold all volumes as retains.
FAY-D-5500RNGTL-WI-1-021418	021418	1605	G	W	N	N	X	3	
FAY-D-71LAURA-WI-1-021418	021418	1358	G	W	N	N	X	3	
FAY-D-399SNIRAD-WI-1-021418	021418	1646	G	W	N	N	X	3	
FAY-D-399SNIRAD-WI-2-021418	021418	1647	G	W	N	N	X	3	
FAY-D-5375MRSHR-WI-1-021418	021418	0955	G	W	N	N	X	3	
FAY-D-4013NIRAD-WI-1-021418	021418	1658	G	W	N	N	X	3	
FAY-D-4013NIRAD-WI-2-021418	021418	1716	G	W	N	N	X	3	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Level IV

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				2/15/18 0950	TA-DEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Chemours Company FC, LLC The

Job Number: 280-106426-1

Login Number: 106426
List Number: 1
Creator: Burtness, Benjamin W

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	